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THE BUILDER

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THE BUILDER

A RECORD OF ARCHITECTURE AND CONSTRUCTION.

WITH WHICH IS INCORPORATED THE "BRITISH ARCHITECT."

VOL. CXVII.—No. 4001 OCTOBER 10, 1919.

AN IDEAL FOR ENTHUSIASM.

WHAT architects think about the artistic quality of contemporary architecture is a difficult and very delicate subject. It might be easy of discussion in a coterie, a privileged atmosphere where slander is impossible and the frankest speech and plainest criticism are prescribed. Examples would have to be furnished, and the controversy ensuing might produce not only enthusiasm for ideals but wrathful criticism. The proceedings would have to be private, for unidealistic onlookers would misunderstand the severity and the standards of professional taste.

The heat that used to be generated in the almost forgotten "battle of the styles" would seem strangely tropical in the cooler atmosphere of the Institute nowadays. But in that heat ideals flared and caught. There was fire both in the words and works of the leaders of the rival schools; those that stood outside the ring of the immediate fray in fear or amusement, were made conscious that they, too, must justify their neutrality, and the light, if not the heat of that fire, is iridescent even to-day

The heat was, in fact, enthusiasm for a positive and limited architectural perfection; perhaps perfectionism may describe its sectarian aspect more fully. School strove with school; delicate fine-line draughtsmanship supported by backlining strove with heavy, firm penmanship. A suppositious Christianity of architectural style, derived from the satires of Pugin's "Contrasts," fought fanatically with Pagan art. Small societies and groups of enthusiasts cultivated both "the germ" and the virus in fervid heat. Amid all this enthusiasm, as might well be expected, English architecture in about a couple of generations achieved more progressive and interesting buildings than any other race or era since the Italian Renaissance

The unloosing of limitations and the sense of freedom in seeking architectural ideals have reduced a friction the maintenance of which gave exercise and warmth to the profession. It is now frankly impossible to conjure affection or dislike either for Gothic or Classic Art to order. It is entirely out-of-date to declare oneself constitutionally averse to any historic architectural style. This is due not merely to the sense of superiority and of increased breadth of view that is characteristic of our generation, but to the recognition of an inherent sympathy between Mediaeval and Classical Art. The limitations of studies involved in the prejudices of the schools have been removed; they are no longer typical of such deadly opposites as Christianity and Paganism, or of aspiring vertical and earth-bound horizontal lines. The fictitious warfare has collapsed, the student wanders freely over every field, and has to cultivate what enthusiasm is possible without the friction of controversy.

The wide recognition of the limitations of each race and age in building art that has followed in the wake of intelligent archæology has had its effect upon architects. It is now an offence against the light to close the eyes that have become opened to the beauty of all good building art merely at the bidding of a doctrinaire specialist or of a crank in taste. Blessed with freedom, we view the so-called styles as vehicles of a universal architecture which reflects the intellectual ideals and scientific accomplishment of the builders, enriched and limited by their historical circumstances. The general and absolute gain of this widened outlook cannot be conceived or regretted by the most ardent mediaeval or classical student, and it brings to architects especially, and to their profession, an important share in the inheritance of this generation.

In architecture, if enthusiasm were of the imitative kind it would be absurd. The delight, however, is genuine of discerning that the intellectual conflict in a problem of plan or construction in the past recurs to-day, and it will mount into enthusiasm when the artistic motive is similarly revealed by analysis in a work of acknowledged or newly-discovered merit. This is equally true of all works of art in measure, though in architecture the variety of aims and factors increase the interest of research. The modern architect is also the contriver, constructor and dignifier of buildings, and his community in aim with his predecessor involves a fellowship of spirit and often of method, and this is ground upon which a wide enthusiasm may develop. The architects of the past—it is a past as long as human civilisation—become sharers in our life and practice. The solutions of their problems and of ours move upon lines governed by the universal laws of thought. Artistic perception is constant as well as progressive. It is incessantly adding to its material. Every building has its speciality, and consequently its new combination of contrivance, construction and artistic treatment; though constant in the facts controlled by horizontal and vertical reaction, the art of design becomes progressive as new possibilities in arched or concrete building become available. The realisation of the bygone architect's ideal and his method of working it out grows with the revelation of the factors with which he dealt, and the increase of the experience of beauty in architecture is understood with a new appreciation. Intelligent archæology is as stimulating to enthusiasm as dry-as-dust antiquarianism; the new generation may discover its warmth to be more healthy than the heat of the "battle of the styles." The opportunity not infrequently occurs of building for similar requirements to those of antiquity. Modern churches and tombs often afford examples, dwellings and buildings for living action seldom. But superficial form or technique will now cease to be as satisfying as formerly. Similarity of spirit and action will be sought for and result in a higher attainment of every true architectural quality. The later works of the masters of the Gothic Revival furnish examples, of which Mr. Pearson's churches may be cited, and for a similar exhibition Alfred Stevens' Wellington Monument.

The question remains whether enthusiasm for the analysis of the motive and process of design in ancient architecture is a possible force in the usual tide of architectural practice, for in this alone is such a consideration of any practical value. The answer may be that a patient and sympathetic study of the conditions will generate in a modern builder zeal to emulate, not the forms, but the living spirit or genius of his ancient brother, and will lead towards a manifest triumph over circumstances. Architectural genius is the spirit resident in its successes.

The world of historic building will cease to be a wearisome panorama, in which the only interest is to identify a similarity of form to some traditional or accepted type. It will become an encyclopædia, expressing everywhere the same intellectual conflict between forces and ideals that besets the path of the architect of the twentieth century. The requirements of the problem may be as different as the materials, but as both the forces of nature and the laws of thought, by which the art of design works, are constant, universal genius of architecture will ever assert itself.

NOTES.

The Railway Strike.

THE whole nation has learnt with satisfaction that the strike, so disastrous to the whole community, is not to be continued and that a settlement has been arrived at. No useful purpose can be served by discussing the terms of that settlement; rather is it to the interests of all parties to consider how disastrous struggles of this kind can be avoided in the future. The lightning strike in connection with the public services, especially when the grievance which is the cause of it is entirely prospective, must be condemned, but research is necessary as to the causes of a resort to such violent methods. If some other remedy had been to hand for adjusting the differences that had arisen as to the future wages of the railwaymen, would they have resorted to an extreme measure which they must have known would alienate public sympathy, and must prejudice their case? The answer to this question lies in the provision of a suitable tribunal capable of dealing with questions of the kind raised in this dispute, and in April last such a tribunal was, with wonderful unanimity, agreed to by the Provisional Joint Committee of the National Industrial Conference, the Report of which Committee was one of the most helpful and hopeful documents laid before the public since the Armistice was signed. If the Government had devoted the time spent on the "Transportation Act" to carrying out a practical scheme on the lines of this Report, at any rate so far as it provided for the creation of a National Industrial Council, the machinery would have been provided for conciliation, but this Report has been pigeon-holed, and the "Transportation Act," as it is popularly called, has been forced through Parliament. The lesson has surely now been learned that if a policy of "reconstruction" is to be carried out successfully, it is well to begin with the foundations. Nothing can be more fatal to reconstruction than industrial unrest, and no time will be lost which is expended upon methods of conciliation and in securing a tribunal which will have the confidence of all parties concerned, to deal with these serious industrial disputes.

The Bel Tower, Christ Church, Oxford.
From a photograph by MR. REGINALD J. HANBURY.

A Lesson from the Strike.

THE strike has shown the power of organisation for a common object. It might have been successful if it had not been opposed by a still stronger organisation which had the moral power of being for the good of the nation at large. It is an object lesson for architects to patiently persevere in the proposals recently made for the organisation and unification of the profession. They were not put forward in a merely selfish class interest, but for the common weal.

New Main Roads.

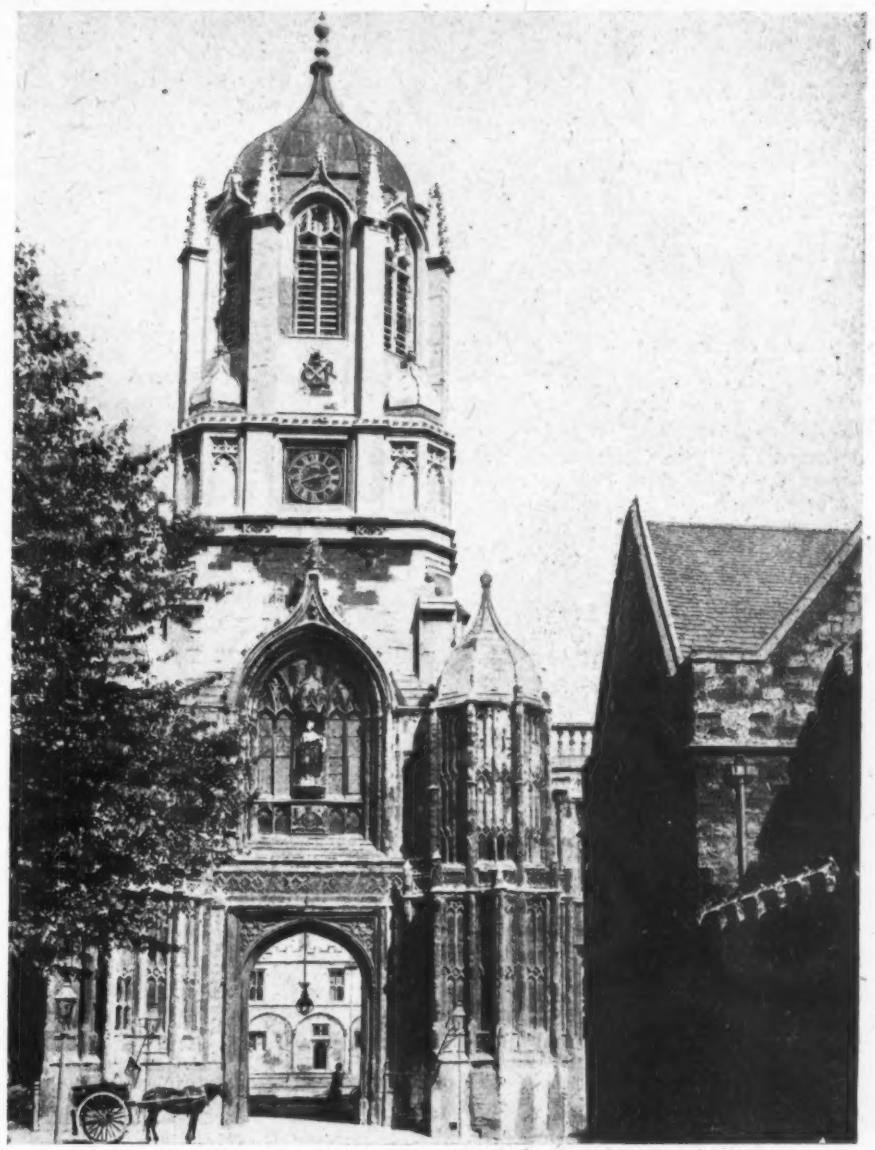
THE almost complete stoppage of railways, owing to the strike, has enormously increased the traffic on the roads and made them, for a time, the main arteries along which the life-blood of the nation flowed. This should draw the attention of the public, Press and Government to the scheme for new main roads that was drawn up by Colonel Hellard, R.E., a few years since, afterwards developed by the London Society and given to the world in the map which has been recently published by Messrs. Stanford. Road transport is now a most useful accessory to railway communication, but is not likely to supplant it, as some enthusiasts imagine, as long as it is made to pay its way. Road users should pay for the upkeep of the roads as railway users have to maintain the track as well as pay interest on the large sums spent in construction. While road communication is of extremely great importance, it is desirable that the beauty of the countryside should not be entirely sacrificed to rapid road travelling. There are a few delightful places quite close to London which owe their quiet beauty to their secluded situation—they are not on a main road. It is to be hoped they will be left undisturbed and not destroyed by the rush and roar of rapid motors. There is still room for everything, even in our small country.

Travellers and the Up Platforms.

Is it not about time that the railway companies made better provision for the comfort of short distance passengers to London every day? On the up side of the line there surely ought to be some decent waiting-room and convenience for the often tiresome waiting of passengers. Yet, at many suburban stations we find all the best provision for the comfort of passengers is on the down side and only a miserable draughty shed on the up side. The cost of this would be comparatively small and would add immensely to the comfort of the travelling public.

Ex-Service Men and the Professions.

THE Minister of Labour has issued an appeal, which we are glad to give prominence to, on behalf of the ex-Service men who laid aside their careers at the call of duty, to aid them to fit themselves fully for the highest posts in the great professions. The Government has decided to supplement private effort by means of Maintenance Grants under the Training Grant Scheme. Training for professional qualification is usually undertaken in schools, or by service in an office or on works, and it is in many cases the custom to charge a premium for pupils who take up such service. More openings for training are urgently wanted, and many ex-Service men cannot now afford to pay premiums. Sir Robert Horne says: "These men have proved themselves ready to give up everything. Their sacrifice cannot be measured in money. But it can be repaid in part. I urge you to think of your debt to them as their premium, and to waive for them the usage of the profession, as many public-spirited firms have already done. For over four years the normal supply of fully trained men has been stopped or diminished. More must be obtained in the next few years than ever before, if the profession is to recover its strength and face the economic struggle that is before the whole nation. I ask you, therefore, to make room for pupils to the utmost of your capacity and to aid the Appointments Department in the work of resettlement, by telling them of what you can do to help."



Tom Tower, Christ Church, Oxford (West Front).
From a photograph by MR. REGINALD J. HANBURY.

Standard Specification for Cottages.

A CORRESPONDENT writes as follows regarding the Standard Specification for Cottages (D82), issued by the Ministry of Health, and which we published *in extenso* in our issue of September 12:—"Under bricklayer, provision is made for walls composed of 3½ in. of clinker concrete in two thicknesses with a 2 in. cavity. The clinker is to be "free from sulphur." This requirement is very desirable, but not strictly practicable, and it would have been better to have limited the sulphur to a desirable minimum. In the case of the proposed use of large quantities of clinker from a given source, it would be worth while making an analysis and stating whether the material should be employed or not. The builder and, in many cases, the architect can hardly be expected to assess the quantity of clinker in reference to sulphur. It should be a considerable assistance to those responsible for housing schemes to be able to appreciate at once from this publicat on what is expected in the matter of construction, though the necessity for strict compliance will tend to possible delays due to negotiation when variations are desired."

The Architects' War Committee.

IN the letter by Mr. C. McArthur Butler, which we print on another page, the suggestion is made that the Architects' War Committee, which was formed in the early days of the war for the common good of architects, might, before it is dissolved, consider the possibility of utilising or adapting for other purposes the machinery erected for war work. We think the suggestion is a good one and hope the Committee, which has done excellent work during the war, will at least consider this suggestion.

Preservation of Old Cottages.

IT is a pleasure to receive such publications as the pamphlet just issued by the Society for the Protection of Ancient Buildings. Small as it is, the price—two shillings—is not too high. We hope it may have the hoped-for result of helping forward the invaluable work of preserving our precious heritage of old cottages. In many cases, we doubt not, it would hardly be considered a matter of pure economy to preserve them for practical use, but such things have a value far beyond mere economics. The letter-press is by Mr. A. M. Powell, assisted by Messrs. F. W. Troup, Chas. C. Winmill, and the Secretary.

Amateur Photography.

THE illustrations of Oxford which we give this week, from photographs kindly lent by Mr. Reginald Hanbury, have an interest for architects apart from the subject, as they show what can be achieved by a discerning amateur photographer in recording picturesque and telling effects. Mr. Hanbury is not an architect, but he has shown by these photographs and others we have seen much more appreciation of architectural quality than is indicated in the work of some professional photographers. It is surprising that more architects do not use the camera as an adjunct to the pencil—not, be it understood, instead of the pencil. Even in well-worn subjects the work of the discriminating amateur is always welcome, and it is possible that a better view of the High at Oxford could hardly be secured than that which we publish this week.

GENERAL NEWS.

Professional Announcements.

Mr. E. W. Cook, A.M.I.C.E., A.C.G.I., has joined, as a partner, the firm of Messrs. Smith, Walker & Co., constructional engineers, 33, Tothill-street, S.W.1.

Mr. Gordon Allen, F.R.I.B.A., has removed his office to 435, Strand, W.C. 2. Telephone, Gerrard 3781.

An Oxford War Memorial.

It is proposed to extend the buildings of Christ Church College, Oxford, as a war memorial.

Obituary.

The death is announced of Professor Francis John Haverfield, Camden Professor of Ancient History at Oxford. Professor Haverfield was a keen archaeologist, and one of the greatest authorities on Roman Britain. His publications included "The Romanisation of Britain" and "Ancient Town Planning."

The War Memorials Exhibition.

The Modern Section of the War Memorials Exhibition at the Victoria and Albert Museum is now closed. Some of the exhibits in this section are being transferred to the War Memorials Exhibition shortly to be held at Burlington House. The Retrospective Section will remain open for the present.

Architects' and Surveyors' Assistants' Professional Union.

With a view to encouraging a better acquaintanceship between members of the above Union, the Committee has arranged an informal meeting of the members on October 14, at Anderton's Hotel, Fleet Street. The Committee hopes that every member in or near London will make a point of attending, and of bringing anyone eligible for membership. There will be a reception from 7.0—7.30 p.m., one or two brief speeches, and for the rest of the evening musical and other items by members of the Union.

The Royal Technical College, Glasgow.

The syllabus of the Glasgow Royal Technical College Architectural Craftsmen's Society for the Session 1919-20, contains the following papers: October 10: President's Address, by Mr. James Muir; October 24: "Notes on Renaissance Architecture in England," by Prof. C. Gourlay; November 7: "Housing," by Mr. A. Davidson; November 21: "The Roof," by Prof. A. M. Gibbon; December 5: "Army Experiences," by "Our Members"; January 23: "Building By-Laws," by Mr. W. A. Macartney; February 6: "The Scottish Housing Act," by Messrs. T. G. Gilmour and W. H. Baxter; February 20: "Interior Architecture in Ships," by Mr. A. B. Mitchell; March 5: "Pneumatic Foundations," by Mr. W. Burnside.

Proposal for East London Improvements.

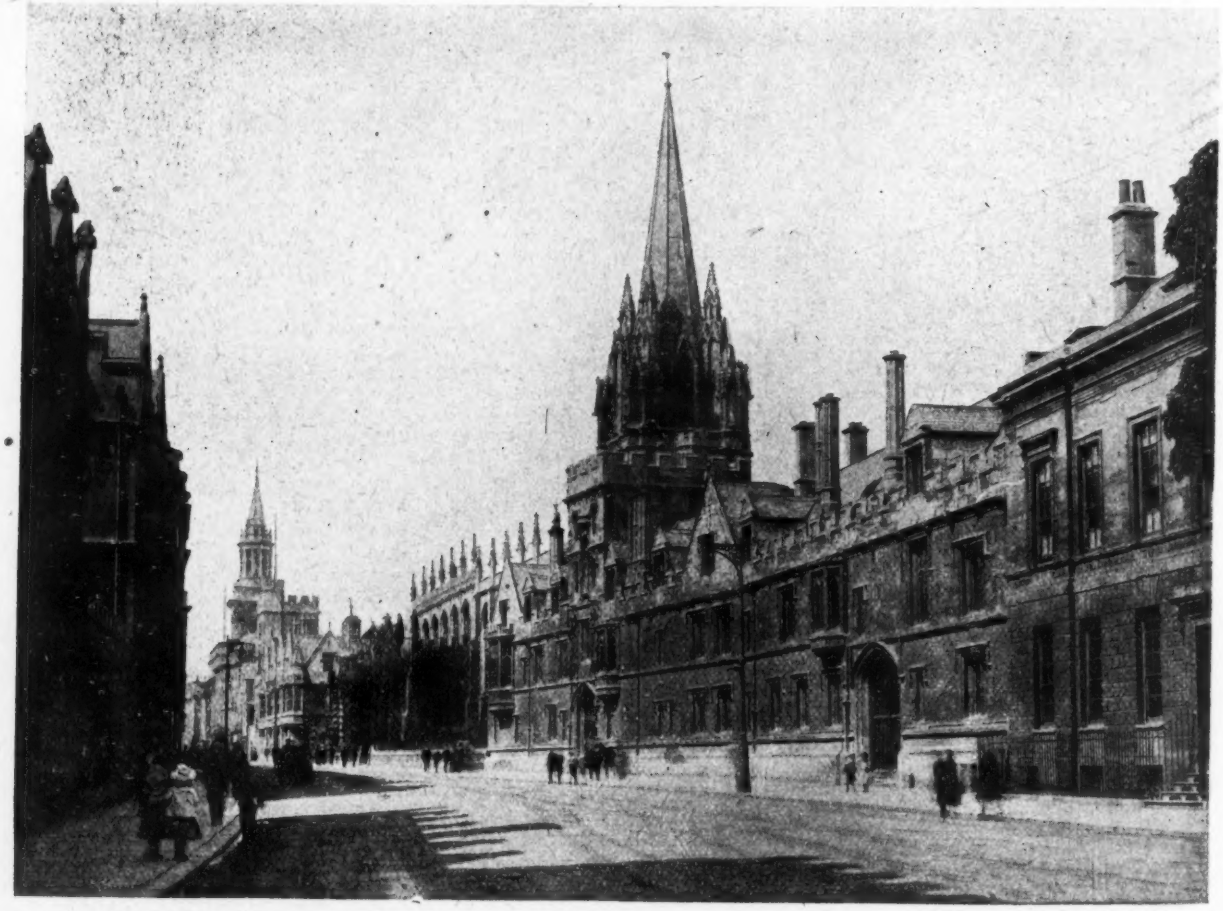
A scheme for the replanning of the parishes of Shadwell, Ratcliffe, St. George's-in-the-East, and Wapping, promoted by Mr. J. D. Kiley, M.P., Mr. J. Nicholson and Sir Richard Stapley, has been published by Messrs. Thomas A. Mawson & Sons, of 28, Conduit Street, W.C. The chief feature of the plan is a boulevard 8,250 ft. in length, and with a width of 130 ft., from the Tower of London to Regent's Canal Dock, and it is suggested that Stepney's "civic centre" and a campanile, to commemorate those who have fallen in the war, should be erected on this thoroughfare. It is proposed that new warehouses, &c., should be designed to allow for esplanades along the river side. The object in view is to foster industry and assist traffic conditions, and at the same time to make the district an ideal one in which to work and live. The Tilbury and Southend Railway, which runs through the borough, would be placed under the new boulevard and connected with the existing underground railway systems. The scheme was outlined and illustrated in our issue for January 24, 1919.

L.C.C. Superintending Architect.

At the meeting of the London County Council on Tuesday last, a resolution, moved by Mr. J. W. Gilbert, was passed, recording on the retirement of Mr. W. E. Riley from the office of superintending architect of the Council, the appreciation of the Council of his ability and its recognition of the high sense of duty displayed by him during his twenty years in the service of the Council. In supporting the motion, Mr. George Dew said that Mr. Riley's tenement buildings were as near perfection as was possible within the limits allowed him. Mr. Riley, in acknowledging the resolution, mentioned that over a thousand buildings erected in London for war purposes had passed under his supervision.

Hooped-Iron Columns.

Mr. L. J. Mensch contributed recently to the *American Architect* an interesting paper on hooped-iron columns with cast-iron cores. The conception of this construction is due to Dr. Emperger, of Vienna, and the author's tests were carried out with a testing machine at the U.S. Bureau of Standards Laboratory, which can make compression tests to over 4,000 tons. The increased resisting power of this construction over ordinary hooped concrete as usually employed for columns in reinforced work is remarkable, as indicated by a series of curves showing the behaviour under test of columns of different construction. The tests were made on actual columns 8 to 12 ft. in length, and were, therefore, actual tests on construction and not deductions from tests on laboratory samples, as is often the case. A very useful table worked out for factors of safety 4 to 5 by 5 to 6 for columns of various diameters and forms of construction is given in the text.



"The High," Oxford: from opposite Queen's, looking West.
From a photograph by Mr REGINALD J. HANBURY.

THE TOWN PLANNING CONFERENCE.

The first Conference in the provinces of the Town Planning Institute was held at Oxford from September 25 to 29, and was most successful. Meetings were held on the Friday and Saturday in the Council Chamber of the Town Hall, and at the opening session a civic welcome was given. Mr. G. L. Pepler (President) afterwards delivered an address on "Town Planning and Housing," in the course of which he said that a prominent sign of the times was the demand that the pleasures and comforts of life, and leisure to enjoy them, should be attainable by all. As a community they must decide on the ideal to which they desired that all their work should tend. Their ideal might well be "the happiness of the people." Primarily, perhaps, in helping them to appreciate that although a home was hardly possible without a house, the creation of a good home was a bigger matter than bricks and mortar—or even reinforced concrete. A good home meant a place where, if they cared to use their opportunities, a family might live in happiness. To make good homes possible was the central aim of the town planner. What practical steps could they take towards the achievement of that aim? First, they must have a plan. The erection of good homes was an urgent matter. In this respect they were suffering from the lack of the exercise of foresight in the past, so that a counsel of perfection was not immediately possible. However, a great deal could be done if each member of the Institute who was concerned in a housing scheme tackled it in the town-planning manner, and all the time with gentle persistence tried to get things looked at from the town-planning point of view. The recital of some of the subjects dealt with in their examination syllabus, which were all concerned ultimately with their ideal of happy homes, would perhaps help to refresh their memories and renew their appreciation of the magnitude and complexity of the whole problem. It also emphasised the enormous importance of the proper allocation of sites for housing, industrial and other purposes and a prior need for a general survey of the resources and possibilities of the whole country. During the war a great deal of research work was initiated by the Ministry of Reconstruction, and one hoped that the excellent reports that were issued would be acted upon. Were they for ever merely to keep adding to towns the centres of which were already overburdened? Might it not be wise to consider the detachment of industries and towns? If electric power was to be produced in a few big centres from which it would be distributed to the whole country, and if the telephone service was brought to the same state of efficiency and as widely and cheaply distributed as in some Scandinavian countries, the problem of decentralisation would be enormously facilitated. If each coal-pit was to have its own village, might it not be well in several cases to build one central small town where the miner would have more social life and mix with men of other callings, but still be within easy reach of his work? Could they not contrive new towns so that each family could produce much more of its own food? It could be done, and not only would the food be better and fresher, but the pressure on goods transport would be eased and the result of a transport stoppage less fearsome. The shorter hours of work in the factory or pit now allowed more leisure for the cultivation of the ground, and during the war many had caught the allotment habit. The towns should at least preserve their allotment belt. Research work must not stand in the way of dealing with immediate necessities, but it would be worth the country's while to endure a little discomfort if in the interval a general plan were evolved that would show the right road for many years to come, so that nothing of what was done would be wasted. In the meanwhile, they could all help if they tackled their immediate task with a wide vision in their minds. Wise town-planning might be a big factor towards making possible happiness in the home by providing that the home was in the right place, that it was artistically designed and grouped with open spaces and places for social intercourse near by, within convenient access of the place of employment and the markets, within easy reach of quick means of transport, the occupier enabled to raise much of his own food, and costing as little as possible because at the first stage due consideration was given to economy in the choice of and laying-out of site, road and sewer design and construction, &c.

Following a vote of thanks to the President, proposed by Mr. J. Thompson and seconded by Mr. F. M. Elgood, a general discussion took place.

Professor S. D. Adshead expressed the view that too much attention was devoted to the actual carrying out of town planning schemes, and not sufficient given to the actual town plan itself. Architects and surveyors and those with special qualifications, must, in the future, make their plans a little more imaginative. With regard to the new Act, it did not seem to him that Part 2, which related to town planning, carried them much further than the old Act. It was time it dealt with compulsion for local authorities, but he was disappointed that it did not emphasise the importance of including a wider area for the scheme than local authorities in the past had been in the habit of including. As to the Clause relating to land so situated that it ought to be included in a town planning scheme, it seemed to him that they were in the hands of the inspectors, and he hoped that they would give a wide interpretation as to land which ought to be included. With regard to the new regulations which were to be made, one matter of the greatest importance was that of transport. He thought at a very early stage of a scheme the local authority should submit a plan showing the roads likely, in the future, to form part of a transport scheme, for the whole development of towns depended on the transport system.

Professor P. Abercrombie said they now had some measure of town planning on the Statute Book. It was not a complete measure, but it was an important step in advance. The President had referred to the necessity for regional planning and he suggested that it was an opportune time for the Institute to consider the best means of doing this. He did not quite know in what way the Ministry of Health would differ from the L.G.B., but he hoped it would be possible for the Ministry to originate a general scheme of development of town planning throughout the country on very broad lines.

Mr. E. R. Abbott (Ruislip-Northwood) dealt at considerable length with the amendments brought about in the new Town Planning Act. There was one provision of great importance in the Act which created the Ministry of Health, and of which he did not think sufficient notice had been taken. This was with regard to the setting up of a Consultative Council, which might not only advise the Minister, but also bring to his notice things which ought to be done. He understood they were to have four of these Consultative Councils, and he hoped they would be of real assistance in initiating some of the reforms which were necessary. With regard to the Housing and Town Planning Act, they ought to feel extremely fortunate that they got any town planning clauses in it at all. The Minister stated definitely that he would only include provisions for the simplification of procedure, but they got more than that. He hoped the simplification of the old Act and of the regulations would bring about a very large number of really comprehensive town planning schemes. They did not want planning of tiny areas, but larger schemes such as those of 10 square miles.

On the motion of Mr. Reay Nadin, seconded by Mr. H. Shawcross, a vote of thanks was passed to Mr. Abbott, and after further discussion the Conference adjourned for the day.

The second sitting of the Conference was robbed of a good deal of its importance owing to the absence of the Right Hon. C. Addison, M.P., the Minister of Health, who had arranged to be present and give an address. The sitting was devoted mainly to the discussion of the proposed regulations, and a number of suggestions were made which will be considered and forwarded to the Government.

Mr. E. R. Abbott made a statement of the position resulting from the recent law case fought by the Ruislip-Northwood U.D.C., on the question of compensation. He suggested that the Institute should discuss the matter at one of the meetings and see if it could get over the difficulty. In the case fought by his Council the amount of compensation to be paid would be very small, but as the arbitration lasted 13 days, and the hearing two days, the costs would be considerable.

The President inquired if such a case could not be dealt with by having a clause in a scheme as to distance between the fronts of buildings. It had been held that 70 ft. was the distance required for adequate sunlight in a room.

Professor Adshead said they could conceive of cases where a whole scheme might be held up on the question of getting space between buildings. It would be a great calamity if they could not give the width in a scheme, and if they were left to rely either on agreements with owners, or on general by-laws which would give a monotonous and sometimes ridiculous width through the whole district.

Mr. Reay Nadin said it seemed that in equity a man was entitled to compensation, but the whole subject of town-planning was bound up with the question of the width of roads. They could not have a satisfactory town plan unless the authority had complete control as to width between buildings and the width of roads. The great difficulty was the old highways. They wanted to bring about a reasonable change in this direction, but he would be sorry to see a stereotyped width throughout the whole of a local authority's area.

A remark by Mr. Platt that his authority did not show building lines on the map, except in regard to Corporation land, led to considerable discussion.

Mr. Shawcross strongly disagreed with such a practice, and said so far as his experience of the Housing Commissioners went, they set an almost pedantic value on the 70 ft. distance. He felt that was all to the good because they did want space about buildings.

Mr. Abbott said the position was that in the case of a new street they could make a by-law saying that no building should approach the centre of the street nearer than, say, 35 ft., which would give 70 feet between the buildings. There was no difficulty about that and a clause could be put in the scheme. The difficulty was with the old highways, with a winding road and irregular frontages. There was no difficulty about fixing a definite building line. It could be done, but compensation had to be paid.

Professor Adshead said it was satisfactory to know they could fix the building line in new streets; but could they vary it? Under a town-planning scheme, if the road was to look anything like decent in appearance, the width between buildings would probably have to vary.

Mr. F. M. Elgood said the point raised by Professor Adshead and Mr. Harvey could be met by means of exceptions. In the Ruislip scheme, power was given to relax the building line to a certain extent in relation to the frontage of buildings. A point not mentioned by Mr. Abbott was that in the case fought by his Council, the owner had actually built his shops before the scheme was approved.

Professor Abercrombie pointed out a difficulty in regard to the universal application of the 70 feet distance. This was when building was on a hill side.

Mr. Barclay Niven said if instead of saying a building should be 35 ft. from the centre of the roadway it was put that there should be 70 ft. between the buildings on either side of the road, then if a building came forward on one side the distance could be secured by the building opposite being set back.

The remainder of the sitting was devoted to private discussion of the proposed new regulations.

CORRESPONDENCE.

"The Six-hour Day."

SIR,—Mr. Benjamin Greenwood, in his review of "The Six-hour Day," addresses one question to Lord Leverhulme which might more appropriately have been addressed to us, as we were solely responsible for the fixing of the published price. In the first place, we must point out that your review, although none the less welcome, is very belated, for this book was published last year, and the production was started more than eighteen months ago, when paper was costing 1s. 7d. per lb. It never occurred to us to ask Lord Leverhulme to endow the book so as to enable us to publish it at a price that was economically unsound. Are we to gather from your reviewer that we ought to have done so? In regard to the title, it is probable that were Lord Leverhulme publishing the book to-day he would call it, "Six-hour Shifts and Increased Output." But the book was planned nearly two years ago, and not to-day.

GEORGE ALLEN & UNWIN, LTD.,
STANLEY UNWIN, Managing Director.

[We submitted the above letter to the author of the article, Mr. Benjamin I. Greenwood, who has sent the following reply.—ED.]

SIR,—I have seen the letter addressed to you by the publishers of Lord Leverhulme's book, "The Six-hour Day," and in reference thereto please allow me to make the following comments:—

If my article, published in your issue of September 26, had been simply a review of the book, I admit that it might reasonably be described as "very belated." I thought, however, I had clearly indicated that the object of the article was to call attention to the dangerous purpose for which the book is being used. I had no intention of criticising the cost of the production of the book. I am not competent to express any opinion on that point; moreover, I did not, and do not, suggest that the publishers ought to have asked Lord Leverhulme "to endow the book." In fact, no criticism of the publishers was contemplated throughout the article, and I doubt whether anyone but the publishers would have assumed anything of the kind. The alteration in the title suggested by the publishers would be a great improvement, for it would be less misleading, and if it were further amended to "Six-hour Shifts in Factories with Increased Output," and if in the book the strictly-limited application of the six-hour day were still more prominently and emphatically indicated, I should be willing (if the offer will not be regarded as impertinent) to subscribe to a fund for the purpose of issuing a cheap edition at a price that would be economically unsound, for the conclusive reasons set forth in the article.

This offer would have been embodied in the article had I not feared that any such proposal might have been distasteful to Lord Leverhulme, and I make it now with considerable hesitation for that reason.

I still recognise that the advocacy of a six-hour day for some fortunate trades will provide a continual source of unrest in the less fortunate trades, where it would be "absolutely impossible and unpracticable," but this disadvantage may possibly be outweighed by the removal of a popular impression that is both false and dangerous, and at the same time the dissemination amongst the working classes of sound and valuable principles on topics other than the six-hour day in which the industrial community is vitally concerned.

BENJAMIN I. GREENWOOD.

Rebuilding the Empire.

SIR,—If architects are to have their proper share individually and collectively in rebuilding the Empire in a material as well as in a wider sense, and their rightful position now and in the future in the scheme of national service, some organisation must be evolved at once whereby the separate architectural bodies can take direct joint action at any moment on behalf of the whole profession. It can be done if it is tackled in what the Prime Minister recently described as the "spirit which has brought us through the war," viz., the sinking of all personal feelings, the pooling of all essential resources, and working all together towards one objective for the common good.

It was in this spirit that the Architects' War Committee was formed and the principle adopted by its founders of union by federation. If this Committee has not accomplished all that some of its members hoped, it has at any rate served a most useful purpose in breaking down barriers, removing prejudices, and bringing into close and friendly relationship the representatives of architectural bodies hitherto personally unknown to, and to some extent suspicious of, each other. The Architects' War Committee contains the nucleus of what I will call "The Federated Councils of British Architectural Societies," a body whose formation under the title of a "Board of Professional Control" I suggested in April, 1912, little thinking how soon, and under what circumstances, it would come into being in principle, if not in fact and in name. Would it not be well, before the Architects' War Committee is discharged, to call its members together and see whether or not the existing machinery erected for war work can be utilised or adapted for other purposes? I am afraid that if the machinery is once scrapped it may never be reconstructed, or any new machinery devised.

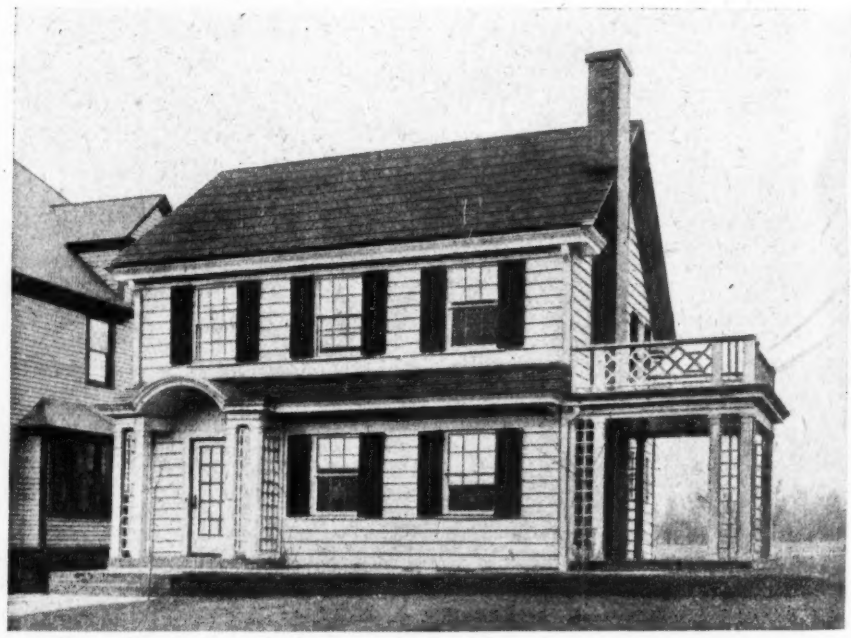
The spirit which has brought us through the war will bring us through other troubles. We have had a long professional armistice, but peace has not yet been ratified, and contentious professional questions shelved during the war must inevitably arise again very shortly unless steps are taken at once to settle them by some such means as I have indicated. The views I have put forward are my own; there is nothing new about them, but now is the time again to discuss my original proposal if it is thought to merit any further consideration. If anyone else has what he thinks is a better scheme, let him give the profession the benefit of it. It is high time that the energy, time and money now expended by the members of the committees of separate professional bodies in trying to attain the same objective should be directed into a channel which will prevent overlapping, and result in unity of command and action.

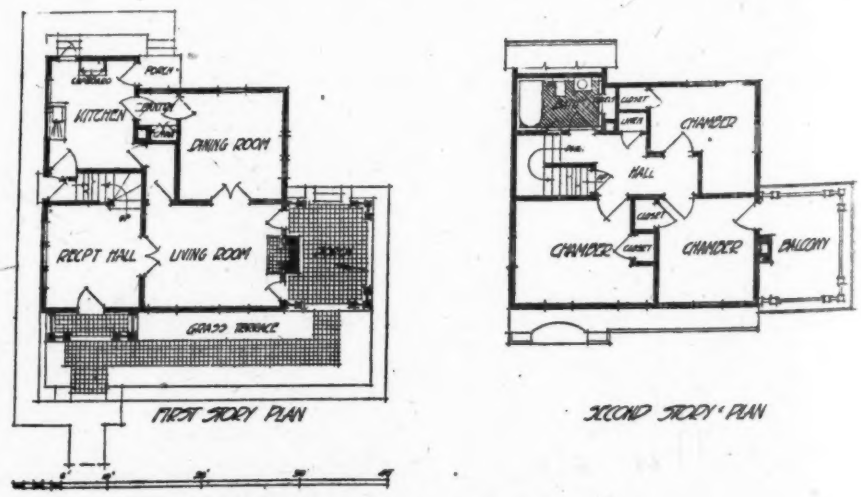
C. MCARTHUR BUTLER.
Secretary, The Society of Architects.

Truth in Construction.

SIR,—In your article last week, on "Timber Frame Houses," reference is made to an experiment in timber construction recently made by Sir Charles Ruthen, near Swansea. These houses are said to have the appearance of "brick built and rough-casted houses," and are stigmatised as being structurally untruthful. The information given is hardly sufficient to form a reasoned judgment; one would like a little more.

After all, what is "truth" in architecture?





Wooden House at Cleveland, Ohio.
MESSRS. FOUNTAIN AND MORATZ, Architects.

A thick brick wall with a 4½ in. stone facing is passed by the purist; but the same brick wall with a 1 in. rendering of stucco is conscientiously condemned as a sham! What with concealed steelwork and other instances of ingenious (?) construction, very few buildings can be said to be truthful now, and a cynic might say that when the Psalmist said "all men are liars," he meant architects. The "Lamp of Truth" has lately been largely eclipsed by the electric light of common sense.

W. T. H. LEVERTON.

Wooden v. Brick Houses.

SIR,—The daily papers are now giving prominence to the vexed question of housing shortage, and inform us that the Ministry of Health is now prepared to consider the possibilities of the application of the so-called Colonial, *i.e.*, cheap and rapid, method of construction. We all know that one of the reasons for the delay in constructing houses which are badly needed is the high price of bricks and the prohibitive labour cost of bricklaying, not due, perhaps, so much to the bricklayers' wages, but to the restriction on the number of bricks that the union will allow a man to lay in a given time. How this restriction is helping the working classes generally may be seen by the amount of building going on at present, so that the trade union reasoning that the less a man does the more work to go round is proved false. The less a man does the higher the cost, the higher the cost the less likelihood of anyone building owing to the inability to obtain even the smallest return on capital and enterprise, so that not only is there no work for more bricklayers but work for other branches of the building trade is greatly restricted. I suppose that one of these days the unions will awaken to the fact that the more a man does, the more work not only for men of their particular union, but for men of all and every union. However, if we cannot have houses built at a reasonable cost in brick, let us have them in wood or concrete. I have lived in a wooden house in America, and found it very comfortable. A most attractive house can be built in timber, and the walls and ceilings of the rooms can be lined with a wall board, which, apart from its artistic and pleasing appearance, keeps the house warm in winter and cool in summer. The use of a wallboard obviates the necessity for any plaster in the house, so that houses so built are ready for instant use, as there is nothing to "dry out" as with plaster. The one great objection to timber houses is the risk of fire, not only to the house in which the fire starts but to the adjacent houses. This can be minimised by allowing ample space around each house. There never was much sense in endeavouring to get as many houses as possible on to a given piece of land, and now that our railways are giving good services to the outer suburbs, I see no reason why such houses should not have a spacious piece of ground all round them. It would certainly be better for the health of the community, and the fire risk would be reduced to a minimum.

D. ASHBY FELTON.

Unit Centralised Heating for Workers' Houses.

SIR,—Concerning your issue on "Heating," the following may be of interest to your readers: The first portion of Longbridge Estate, Northfield, Birmingham, was carried out for the Austin Motor Co., Ltd., during 1917 to meet the pressing needs of munition workers. To expedite completion, 200 wooden bungalows were imported from U.S.A. to a standard plan (ready cut, but unassembled). Among the considerations to reduce household routine and feminine drudgery to a minimum, the principle of central heating received first thought, but, owing to the uncertainty of the extent of the war-time project and the speed of erection necessary, it was decided that the system could not be adopted in the admittedly best way, namely, from a large centralised plant, but the independent units finally completed have been constructed, as far as possible, with that ultimate end in view.

The subscriber has made repeated observations in the hope that the pioneer experience (so far as this country is concerned) in the heating of working-class dwellings in this manner may be of value in future undertakings. In dealing with the cosmopolitan mass of tenants, these observations are not perhaps so helpful in judging the effect of the innovation on local prejudices and customs, although they possibly represent the more general reception of the venture by the people as a whole. Broadly speaking, the principle of central heating is greatly appreciated, the advantages being at once patent to the engineer and the better educated tradesman, but the wife of the average labouring man appears to resent this so-called "interference" with her domestic "rights," and possibly from eighteen to twenty per cent. of the tenants would gladly cope with the extra trouble to be able to "sit before a nice fire." The systems include a sectional magazine boiler of conical pattern of 33,600 B.T.U. capacity, radiator heating on two circuits (one for living rooms and one for bedrooms) with control valve on each and with a common return, and a domestic circuit indirectly heated by calorifier in thirty-gallon cylinder supplying bath and sink. Galvanised pipes are, therefore, only used in the domestic circuit. The cost of the schemes under contract was £38 10s. per bungalow—containing three bedrooms, 10 ft. by 10 ft., bathroom, kitchen, 10 ft. by 10 ft., and living-room, 20 ft. by 10 ft.

Although we may reasonably assume that only about one-third of the cubical contents of comparable dwellings would in the ordinary event be heated, it is interesting that figures show that the average consumption of solid fuel for the boilers, plus gas for gas washing-boilers, cooking and lighting (for the period of 12 consecutive months ended June, 1918), only exceeded the allowance under the Household Fuel and Lighting Order by, roughly, 4 per cent. Fifty brick houses of a larger type were also built with very similar installations at about the same cost, heating only part of the premises. The results are equal in all respects. Our greatest difficulty has been the inculcation into the minds of the tenants the imperative need to keep all circuits in convection during frosty weather, and in consequence of this fact last winter, a mild one, repairs and replacements amounted to an average of 20s. per house.

JOHN W. WILSON, M.S.A.

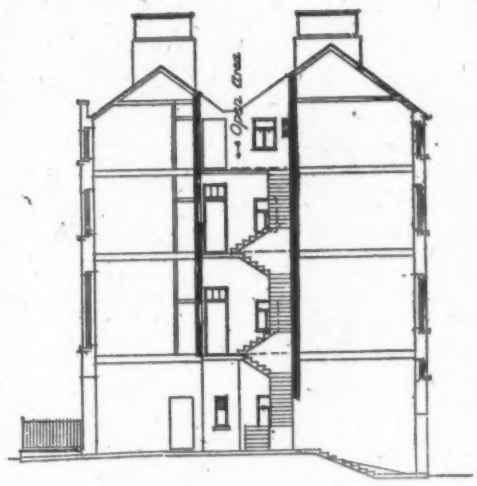
Oil Heating.

SIR,—Your editorial of September 26, entitled "Heating," contains a paragraph that is slightly in error. It says: "The proper burning of oil requires arrangements which mechanical science has not yet applied to our firesides and kitchens." In countries where oil is produced it is used extensively for all heating purposes. But probably the oil States of the U.S.A. have brought its use to the highest perfection. Apart from the conversion of oil into gas, crude oil—that is, unrefined oil from the wells, and of the consistency of treacle—is used in ranges and grills for cooking and heating even in the largest hotels and restaurants. It is almost always used for furnaces connected with hot-water and steam supplies. The oil is delivered and pumped into a storage tank, which is usually under the pavement or connected by a three or four inch pipe. There is a valve (to lock) on the pavement in place of our coal-shutes. In use, the oil is piped to the range and is sprayed into a heated furnace under draught (as in a ship); the result is a very high percentage of combustion, little dirt, and no stoking. Crude oil is, of course, far cheaper than any of the refined grades of petroleum and is very economical when used in this manner. For heating purposes, very little attention is required when the supply of oil and draught is controlled by a thermostat.

In the same editorial you speak of the kitchen range as capable of improvement. Here, again (much as I regret to say it, being British), it is worth while studying Canadian and American ranges; my own experience has proved them to be far more economical and incomparably more convenient and cleanly than that ponderous instrument of domestic torture—the English kitchen range. The American type stands clear in the room so that it is in full light and one can clean all around it; not, as in England, cooped up in a brick cave with neither light nor convenience, and an expensive addition to construction. There is a round stove-pipe, 8 in. in diameter, which is led into a chimney 18 inches from the ceiling; this flue is in sections and can be taken down for cleaning with ease. The hot-water supply, if heated from the range, is produced from a coil which lies in the fire-box on the side opposite the oven; it is connected with a cylindrical tank which stands on a pedestal by the side of the range, or is enclosed in a small cupboard. Should the heating coil wear out or leak, it is merely disconnected from the supply pipes and does not necessitate the fire being put out; a new coil is bought at the ironmongers for two or three shillings and can be connected up by any common-sense person.

Convenience, efficiency, simplicity—three qualities little understood on this side of the Atlantic—are yet as essential to domestic comfort and economy as to the running of a big institution. If the British public ever get a fair trial of American houses they will never live in the present ridiculous and comfortless ones. Let us keep the best that is English—our charming exteriors, such as were common in the 17th and 18th centuries—but let us build efficient houses, even if we have to take our ideas out of American brains.

E. W. ARNOLD B. STOTON.



Conversion of Houses into Flats. (Cross section.) *See* p. 362.

The Liverpool Architectural Society.

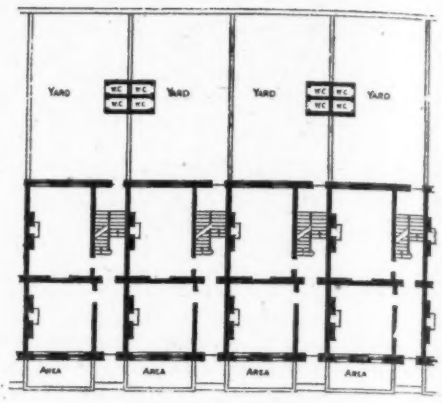
The Syllabus of the Seventy-second Session (1919–1920) of the Liverpool Architectural Society contains the following addresses, papers and functions:—October 6, Opening Address by the President, Mr. T. Talieson Rees, F.R.I.B.A.; October 20, Paper by Sir Ambrose Poynter, Bart., F.R.I.B.A., on "Architecture in South-east Italy"; November 3, Address by Lord Leverhulme; November 17, Dinner to overseas members of H.M. Forces; December 8, Paper by Captain E. J. Rimmer, on "Building Contracts"; January 19, Paper by Major G. W. Fraser, M.C., F.R.I.B.A., on "An Architect at the War"; February 9, Paper by Mr. W. J. Hide, M.I.M.E., on "Electric Installation of Small Houses"; February 23, Paper by Mr. J. N. Sellars, on "An Architect's Use of a Library"; March 8, Paper by Mr. H. L. North, B.A., F.R.I.B.A., on "The Flower Garden"; March 22, Annual General Meeting and closing address by the President. The meetings, with the exception of that on November 3, will be held at the Society's rooms, 13, Harrington-street, Liverpool, and the papers will be read at 6 p.m. Honan's Scholarship (an annual travelling scholarship of the value of £50) will be awarded for the best essay on the work of John Vanbrugh, Christopher Wren, or Inigo Jones.

CONVERSION OF HOUSES INTO FLATS.

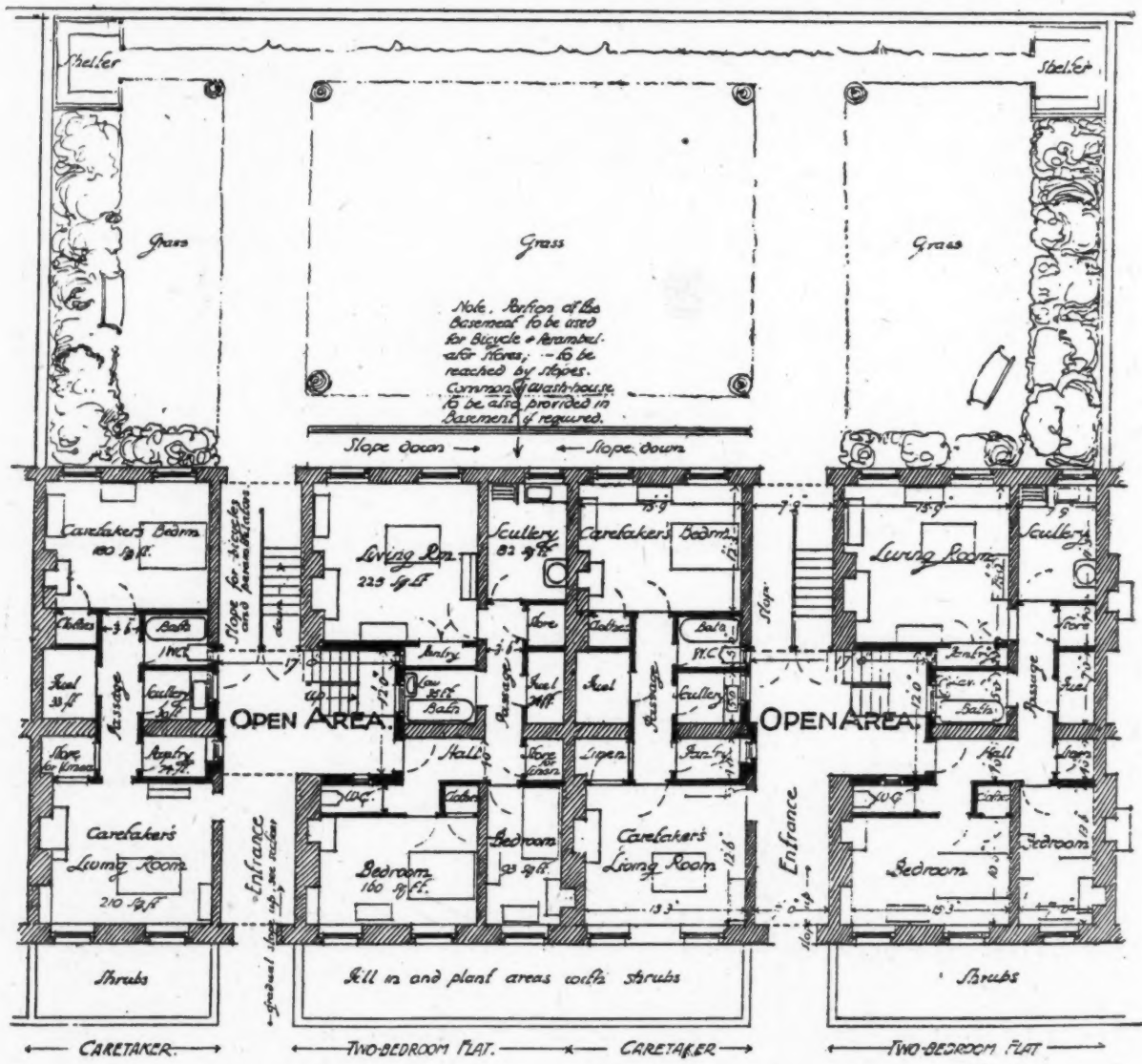
[*Continued from page 341*].

THE new Housing Act confers on local authorities extensive powers for the acquisition of houses for the purpose of converting them into flats, and for lending money to owners who are desirous of undertaking such conversions. Furthermore, the Act assists in the modification of restrictive covenants, by enabling a County Court, upon application being made to it from a local authority or lessee desirous of undertaking such conversions, to make an order varying the terms of a lease containing such restrictive clauses. The Ministry of Health is willing to sanction loans to local authorities to enable them to carry out schemes of conversion, and in cases where it be found impossible to render the scheme self-supporting it may rank for financial assistance from the Government as part of the housing scheme for the district. The matter, however, is one that may be in many cases difficult to decide, for there are many houses that may at the first glance appear satisfactory, but which, upon more careful examination, will show that the additional accommodation to be obtained will not be commensurate to the expenditure involved; again, the first superficial inspection may not suffice to bring to light the many structural shortcomings, which would at once render the scheme an extravagant enterprise. Houses in which all the internal partitioning is of lath and plaster, are eminently unsuitable; furthermore, on stripping badly built houses of this description, it will often be found that the entire brickwork is perished, and the only course to pursue is to demolish the whole structure. Before embarking upon an undertaking of conversion, it should be ascertained that the carcase of the existing structure represents a third of the value of the building in its completed state; it thus forms a sufficient margin for the raising of the required capital. The existing by-laws relating to lodging houses, or to houses occupied by more than one family, are not to be allowed to interfere with these schemes of conversion. Thus, while it is essential that certain requirements in the matter of structural and sanitary arrangements must be fulfilled, it is not intended that houses otherwise suitable for conversion should be allowed to remain vacant on account of certain minor contraventions of existing by-laws.

The competition which was organised by the Royal Institute of Architects for Ireland under the aegis of the Local Government Board for Ireland, for which premiums of £50 and £25 were offered for the best designs for the conversion of blocks of four existing houses into self-contained flats, has led to a very able solution on the part of Messrs. Beckett & Harrington, whose winning design is here shown. It will be observed that the houses are typical Georgian terrace houses, and where, as in this case, several can be dealt with simultaneously, the problem becomes considerably



Before Conversion.



GROUND FLOOR PLAN.

Scale 8 feet to an inch.

0 4 8 0 20 30 40 50 feet

After Conversion.

Conversion of Houses into Self-Contained Flats in Ireland.

Messrs. BECKETT & HARRINGTON, Architects,

simplified, and results in greater efficiency. The particular houses with which this competition dealt, are typical of many that exist in London: fine spacious houses, of sound construction, with large rooms and ample staircases, built to house the highest social life of the period, but now being fast abandoned to the tenement type, where the front door is on the latch, the hall and staircase public property, for whose maintenance no one is responsible, and the sanitary accommodation of which is of the most inadequate description. The authors of the designs based their scheme on the following principal ideas, subject for economical reasons to the limitation of the amount of alteration of the existing structure as much as possible:—

(*a*) Means of access to the separate flats should be ample and should be open at all times to supervision. Public access to the open space at the back must, however, be capable of being closed at night by a gate under the control of a caretaker.

(*b*) The general or public staircase must be open to the weather and in full view of the tenants generally; it is anticipated that it would be properly lit at nights by a large central arc lamp. It should be of impervious and easily cleaned materials.

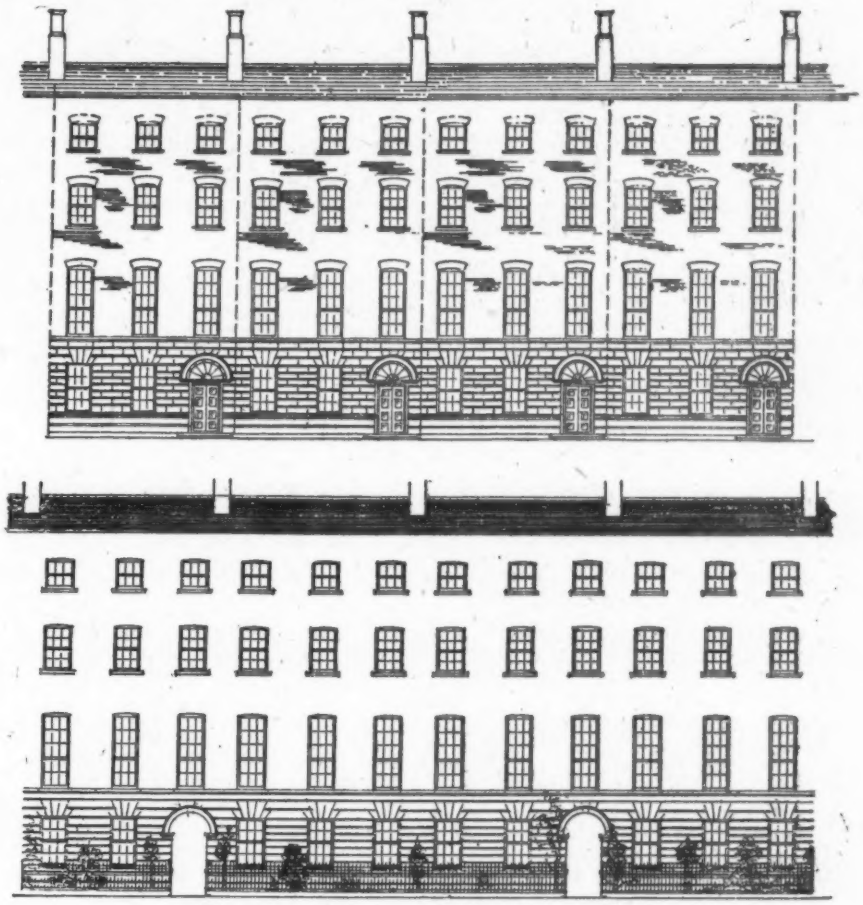
(*c*) A sufficient number of dwellings should be grouped together to allow of the employment of a caretaker, to be responsible for the cleaning and care of the premises generally.

(*d*) Every dwelling to be entirely self-contained and to have all necessary conveniences.

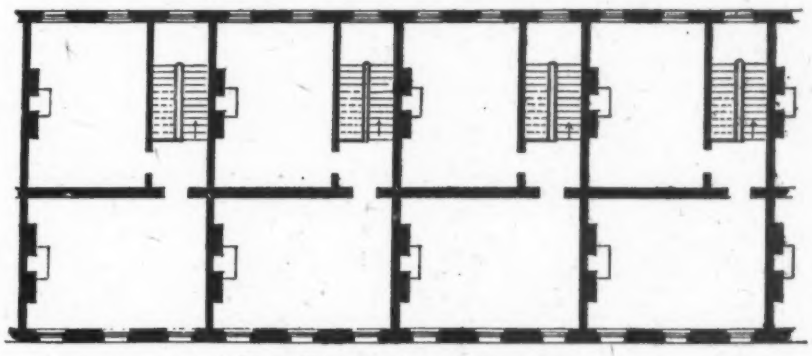
(*e*) It is desirable that the open space at back should be as large as possible, to allow of children's playground; the two groups are thrown together so far as this and the use of the basement are concerned. This arrangement also permits of some sharing of work between the caretakers of the two groups, which would be an advantage in case of illness or temporary absence.

Hitherto we have been concerned, for the most part, with the conversion of houses into flats of small accommodation. There is, however, as has already been indicated, a very large demand for flats—particularly those in which service is supplied—which, although providing accommodation on a scale very inferior to that to which its tenants have probably been hitherto accustomed, are yet of somewhat more generous proportions than those with which we have so far dealt. We hope to deal with a scheme for the conversion of houses into larger flats in our next issue.

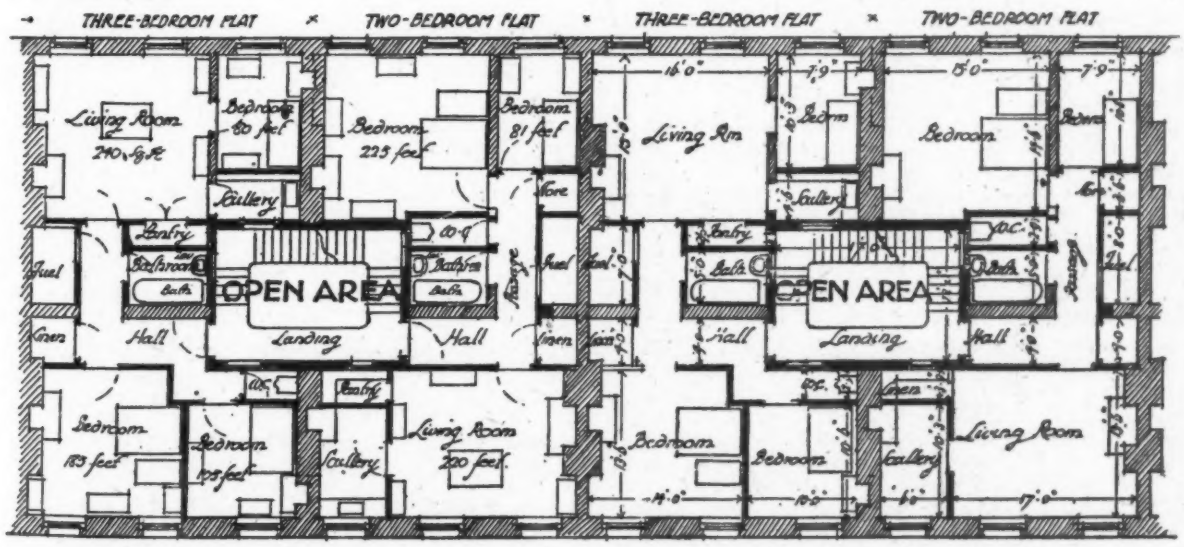
(*To be concluded.*)



Elevations, before and after Conversion.



First Floor, before Conversion.



FIRST, SECOND, AND THIRD FLOOR PLANS.

0 5 10 20 30 40 50 feet

Houses in Ireland, before and after Conversion.
Messrs. BECKETT & HARRINGTON, Architects.

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ILLUSTRATIONS.

"Furtherside," Woldingham.

The fine ridge of hills which stretch from Guildford to Westerham holds many admirable sites for houses, but along the whole length nothing is finer than that position which lies immediately to the south of Woldingham. The whole of the south country to the sea is viewed thence in one great panoramic view, which is of its kind one of the best things to be seen in English landscapes. Situated on the crest of this hill—commanding this glorious view— is the cottage residence called "Furtherside," which has been built from the design of Mr. Maurice E. Webb. It was built as a bachelor's residence, as will be seen from the plan, and is treated in an original way, which gives interest to the staircase and first floor corridor. The long room, overlooking the view to the south, is planned to be used at one end as a dining place and the other as a lounge: the latter is shown in a sketch. There is a cosy little den or boudoir at the west end. The completed garden scheme is shown in Mr. Webb's elevational drawing, but no sketches of the house show it in its present state. It would be difficult to imagine a more delightful site than this, which stretches from the roadway some distance down the hillside to the great beech trees below. Admirably furnished and appointed, this small country house possesses more than ordinary individuality and charm.

Proposed Colonial Residence.

This residence is to be built on the Blue Mountains, a short distance from Sydney, N.S.W. To be built of brick rough casted, tile roof, and half-timbered filling to the gables. The lounge verandah opening off the dining room and hall, and sleeping-out balconies are much desired assets to an Australian residence. The domestic arrangements have been designed as labour-saving as possible, a point which has to be observed in the Colonies even more so than here, and an abundance of cupboard and box-room accommodation has been provided—there being plenty of available space in the roof for further accommodation in this respect, if required.

A. DOUGLAS-SMITH.

Bridport War Memorial.

The memorial is to stand at the side of the churchyard, facing the road, and will occupy the space between two existing stone piers, as shown; the present iron railings being removed. The lower part of the memorial consists of a stone seat, behind which is a low box hedge, with a wall at the back. The actual monument stands in the centre upon a base formed by steps, upon which are cut the names of the fallen. The figure in the niche on the front of the monument represents St. George, and there is a figure at each side representing a soldier and a sailor. The material used for the memorial is intended to be Doulting stone. Mr. G. Gilbert Scott, A.R.A., is the architect.

Oxford.

The views of Oxford given in this issue are referred to in our "Notes" pages.

COMPETITION NEWS.

Oxford.

FOR THE CITY COUNCIL.—Designs for the lay-out of a congested area in the centre of the town. Mr. H. V. Lanchester, F.R.I.B.A., will act as assessor. Sending-in day, October 20. Further particulars from the Town Clerk. (See our advertisement pages, August 15).

Leamington Spa.

FOR THE WAR MEMORIAL COMMITTEE OF THE TOWN COUNCIL.—Designs for a war memorial. Premiums £100, £50 and £25. Mr. H. V. Ashley, F.R.I.B.A., of 14, Gray's Inn-square, W.C., will act as assessor. Further particulars from the Town Clerk. Sending-in day, October 15. (See our advertisement pages, July 25).

Portishead.

FOR THE URBAN DISTRICT COUNCIL.—Designs for lay-out of block of houses. Premiums £50, £30 and £20. Mr. C. F. W. Dening, F.R.I.B.A., and Mr. F. H. Smith have been appointed assessors. Sending-in day, October 31. Further particulars from Mr. F. H. Smith, Surveyor, Council Offices, Portishead. (See our advertisement pages, September 19).

The Labour-Saving House Competition.

The closing date for receiving entries in the *Daily Mail* Labour-Saving House Competition has been extended to October 13, by which day all drawings must be received by the Secretary of the Competition, 130, Fleet-street, E.C. 4.

Brentwood.

FOR THE GOVERNORS OF BRENTWOOD GRAMMAR SCHOOL.—The Governors have decided to invite competitive designs from not more than three architects for a Memorial Assembly Hall and five class rooms, and a physics laboratory. An expenditure of about £8,000 is contemplated. Premiums of £150, £50, and £30 are offered. Mr. H. P. Burke-Downing, F.R.I.B.A., will act as assessor. The competitor whose design is accepted will be appointed as architect.

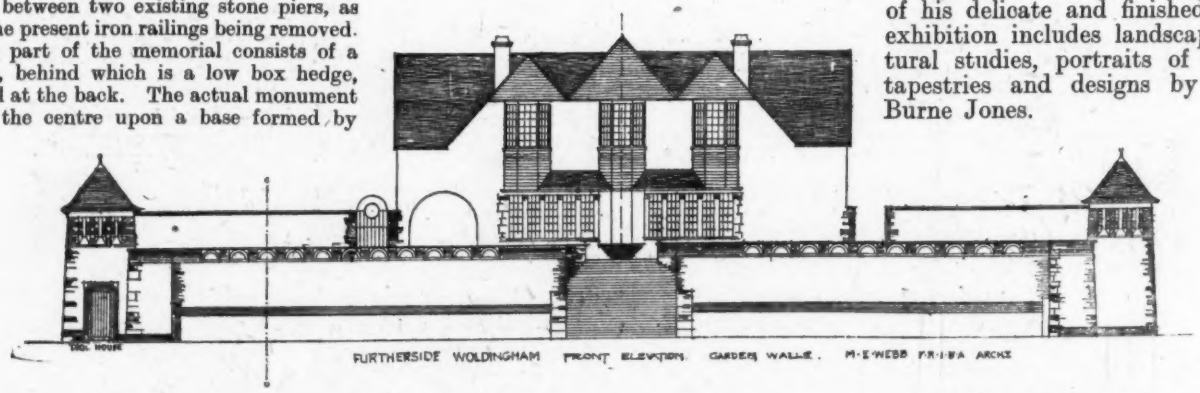
MEETINGS.

FRIDAY, OCTOBER 10.

The Auctioneers' and Estate Agents' Institute of the United Kingdom.—Presidential Address, by Mr. W. Waite Sanderson. At 34, Russell-square, W.C.1. 7.45 p.m.

THURSDAY, OCTOBER 16.

The Society of Architects.—Special general meeting to elect officers and Council for the ensuing Session. Paper on "A New System of Building Devised for the Speedy Production of Houses at a Reasonable Cost," by Sir Charles T. Ruthen, O.B.E. At 28, Bedford-square. 8 p.m.



EXHIBITIONS OF THE WEEK.

Paintings of British Mountains—Vienna Art Sales—Ruskin as Artist at the Royal Academy.

IN describing in our last week's notes the Memorial Exhibition of the late Edward Stott, we alluded briefly to "Paintings of British Mountains," by Mr. Adrian P. Allinson, which were placed on view at the same time in the Fine Art Society's Galleries. The contrast between the quiet, tender reserve of Stott's studies and paintings and the strong, almost strident, colour and drawing of Mr. Allinson's mountain scenes is sudden, and for the moment scarcely favourable to the latter artist; but once that impression is past we find much to admire in these frank, uncompromising studies of our high peaks, under the magic of sunlight and snow. Most successful, in fact, are the snow scenes, and most convincing in their rendering; what we feel is present is sincerity, vigour and truth of rendering—what is lacking is imaginative conception. Structurally correct and fine in their colour scheme are such studies as "Cader Idris," "Moel Maar," "The Thawing Loch," and "December Sunset."

The recent decision at Vienna of the Council of Ministers to sell the objects of art from the Imperial Palaces and State buildings, including valuable paintings, tapestries, gold and silver work, and rich historic furniture, amounting in value to some £40,000,000, will necessarily affect the art market of London, which is still to a large extent the clearing-house of the world. The Gobelin and Arras tapestries collected by the Hapsburgs will be apparently among these, as well as flagons and gold and silver salt cellars—such as was that most famous one designed by the Florentine Cellini. The shortage of food supplies in Austria is the reason for this sale, which will, however, apparently not touch the actual Crown collections, as by the Peace Treaty these last were not to be sold or dispersed for twenty years.

The Centenary Exhibition of paintings and drawings by John Ruskin, opened last week, in the unavoidable absence of Viscount Bryce, by Sir Aston Webb at the Royal Academy is one of exceptional interest. To many of us, who know and admire Ruskin as a writer of marvellous power, the beauty of his drawing will come as a new revelation, though it appeared in some of his architectural drawings exhibited in the Rome Exhibition of 1911, and in the beautiful plates of his "Seven Lamps of Architecture," whose frontispiece of "Tracery from the Campanile of Giotto" is an example of his delicate and finished work. The exhibition includes landscapes, architectural studies, portraits of Ruskin, and tapestries and designs by Morris and Burne Jones.

THE ARCHITECTURE OF COLOGNE CATHEDRAL.

A GERMAN LEGEND.

Cologne, owing chiefly to the presence of the army of occupation, stands out so prominently among the cities of the Rhineland that special interest is attached to its Cathedral, said to be the most magnificent ecclesiastical structure in the world, excepting, perhaps St. Peter's at Rome. Consternation spread throughout Germany when, between three and four years ago, the Kaiser and his advisers, in the stress owing to the lack of metal for munitions, decided to remove from the campanile of the cathedral the great "Kaiser bell," and melt it down for ammunition. The legend as to the origin of Cologne Cathedral, blended at once in the supernatural and the satanic, is, in the light of recent events well worth retelling. In that connection, the graphic version of the celebrated French publicist and *savant*, M. Saint-Marc Girardin, is probably the most trustworthy.

Archbishop Conrad of Hochstenden, wishing to erect at Cologne a cathedral which should outvie in splendour all the churches of Germany and France, invited a celebrated local architect to prepare and submit a plan. Gerhard von Reile, or Rile, is supposed to have been the name of the architect, who set about his stupendous task in 1248. Hochstenden's scheme was of so grandiose a character that Reile, doubting his own abilities, spent a vast amount of time in formulating his plans. Once during a country walk, he sat down on a bank of the Rhine, and, in an abstracted manner, tried with his walking stick to draw the façade of a church. An old man, walking along the bank, stopped near Reile, and looked intently at his outline in the sand. "Mayence, Amiens, or some other city famous through its cathedral," he remarked with a sneer. Then the architect had to recognise that his supposed inspirations were merely recollections! Wounded in his professional pride, he turned to the old man and, with acerbity, asked him whether he thought he could make as good a sketch of a cathedral façade. The stranger, without uttering another word, took the walking-stick, and, with incredible rapidity, sketched an original plan in the sand.

"Ah!" exclaimed Reile, struck with the graceful outlines, "I see that you know your art. Are you, by chance, from Cologne?"

"No," replied the stranger, returning the stick.

"Continue—finish your plan, I implore you, said Reile."

"Not so, as I should then give you my scheme, and you would have all the honour in case of reproduction."

"I will give you ten golden crowns to finish it!" cried the architect excitedly.

Thereon, the old man drew from beneath his cloak an enormous leather purse which he showed full of gold coins. Then he tossed it in the air in a careless manner and caught it in its fall, indicating thereby that he was independent of money. Suddenly the architect, exasperated by the disdainful demeanour of the stranger, drew a dagger and rushed upon him. "Finish the plan or you shall die!" he exclaimed.

"Violence! and against me!" said the old man in a calm voice. With lightning agility he disarmed his adversary, and knocked him sprawling. "You now know," he added, "that neither gold nor violence can overcome my determination. Still, you may, if you wish, obtain the plan in an honourable manner."

"How?" inquired the architect, rising from the ground.

"By engaging your soul to me for eternity!"

The architect recoiled, uttered a cry of terror, made the sign of the cross on his forehead, and the stranger vanished. Several days passed. Meanwhile Reile, greatly obsessed by the old man's sketches in the sand, made desperate efforts to formulate an imposing plan of his own. But, contrive as he would, his ambition was vain. Inspiration would not come to his assistance. Once more at nightfall he found himself on the bank of the Rhine. He had not gone far when he overtook the old man, who appeared to be sketching in the sand, in lines of fire, the outlines of a cathedral front. Plainly visible were the towers, the spires, the windows, the massive porticoes, the niches, the gargoyles, the tracery—the complete outline, in fact, of a magnificent church which flashed for a few moments and then was effaced. At length the mysterious stranger turned to him. "Do you still wish for my plan?" he asked. Reile gave a deep sigh. The stranger, struck with his hesitation, sketched in lines of fire a magnificent portico. Enraptured and altogether beyond self-restraint, the victim succumbed. "Give me your plan and I will do all you wish!" he murmured.

"To-morrow at midnight—here!" whispered the magician artist, and at once he disappeared from sight. The following morning, as the architect sat at a window speculating as to the best site in Cologne for the new building, his old housekeeper, attired in black, entered the room. "Where are you going, dressed in black?" he inquired.

"I am going to the church of the Holy Apostles to say a mass of deliverance for a soul in purgatory!" she replied. She had suspected what had happened. The architect, in the abandonment of despair, threw himself on his bed and burst into tears of remorse. "Neither mass nor prayer can deliver me now!" he cried. "I am damned for ever—because I have wished it!"

Having related the whole story to the housekeeper, she at once consulted a priest. The latter said that nothing could be done for the miserable man. At the same time he was convinced that a cathedral such as that sketched by the old man would, from an ecclesiastical point of view, make Cologne the most illustrious city of Germany, and devotees would come there from all parts of the world. "My good woman," said the priest, handing her a silver reliquary," here is a relic of the eleven thousand virgins. Give it to your master. Tell him to take it with him on his next meeting with the magician—tell him to seize the plan of the marvellous church before completing the engagement as to bartering his soul, then let him exhibit this relic."

At midnight the architect kept the appointment. "There is the plan of the cathedral, and there is the document for you to sign,"

"Furtherside," Woldingham: The Terrace. Mr. Maurice E. Webb, F.R.I.B.A., Architect.

remarked the stranger. Thereon the architect, seizing the marvellous plan with one hand, held out the relic with the other. "By virtue of this holy relic, vanish satan!" he exclaimed. For a moment the old man remained immovable. "A priest has counselled thee—it is a trick of the Church," he retorted. He made a desperate effort to recover the plan but without avail. The holy relic proved more powerful than his satanic powers.

"I admit defeat," cried the magician, "but in spite of your relics and your priests I will be revenged. By a trick you have robbed me of my plan. Cologne Cathedral never shall be finished. I will efface your name from the memory of men. You, the architect of the finest cathedral in the world, shall not be damned by me. You shall have a worse fate—you shall be forgotten by posterity!" Then again he vanished.

Soon, according to the marvellous plan, the architect commenced the building of the magnificent fane, which grew day by day. At length, remembering the threat of the author of the plan, he resolved to have his name engraved on a copper plate to be fixed in the portico of the building. Vain hope! Suddenly broke out quarrels between Archbishop Hochstenden and the residents of Cologne, with the result that the work was indefinitely suspended. The architect, heart-broken, died suddenly, and, if trustworthy historians are to be believed, his true name has been lost in oblivion.

"There is a mysterious power," declares Girardin, "which hinders the completion of the cathedral—a power as great as Satan's, a power which never can be vanquished or deceived by relics or priests—the failure of money! There would be necessary, I do not know how many millions of marks, to complete the massive fane, but the failure to procure it confirms in a remarkable manner the malediction of the magic draughtsman!"

Apart from the legend, the chronological associations of Cologne Cathedral are deeply interesting. The edifice, said to have been the depository of the bones of the "eleven thousand virgins," and the heads of three kings, was commenced in 1248. The work, always intermittent, was suspended in 1509. So it remained till about 1814, when the Prussian Government provided a considerable sum of money and authorised an extensive scheme of restoration, renovation and extension. This went on for thirty years. Six centuries after the commencement of the building the new portion was dedicated to public use in the presence of the then King of Prussia, Frederick William, whose successor was the grandfather of the ex-Kaiser. The original great bell, placed *in situ* in 1448, weighed 11 tons 3 cwt.—4 tons 5½ cwt. lighter than Big Ben of Westminster, 6 tons 7 cwt. lighter than Great Paul of St. Paul's Cathedral, and 8 cwt. heavier than the heaviest bell in York Minster. But the "Kaiser bell" of Cologne, threatened with the melting-pot three years ago, weighed 27 tons 13 cwt., and was placed in the campanile in 1887.

The Ruskin Centenary.

The centenary exhibition of drawings and objects of interest in connection with the life and work of John Ruskin, was opened last week in the galleries of the Royal Academy. Sir Aston Webb, P.R.A., in welcoming the Ruskin Society, remarked that when the absorbingly interesting exhibition became known, it would be a revelation to those who knew Ruskin only through his writing. Up to the age of 40, Ruskin was the evangel of art; his second phase was that of evangel of political economy. There could be no doubt of the sincerity and eloquence with which he preached his gospel of art. His sincerity would be strikingly impressed by the drawings, sketches and lectures. He popularised art, and turned the attention of his generation to art in matters with which art had never before been associated.

COTTAGE DESIGNS.

The design for cottages given on this page is by Mr. L. J. Redgrave Cripps, of Dinas Powys, who gives the following particulars:—

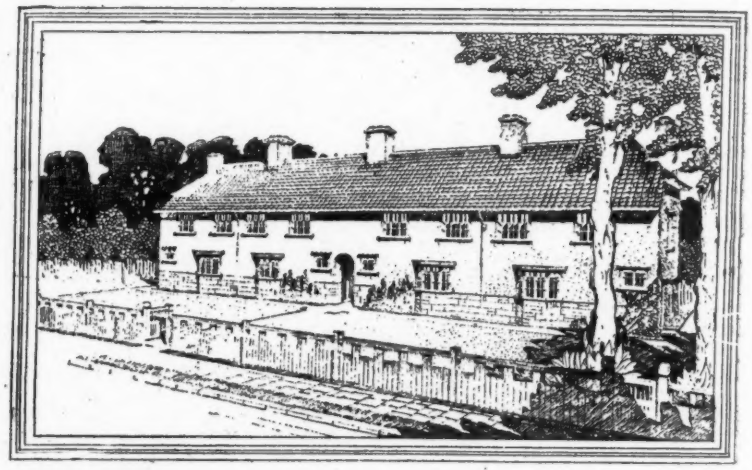
This design is the outcome of an attempt to apply the detailed principles laid down by Mr. D. H. Butterworth in his article entitled "The Efficient Home" (published in *Builder* of August 15, 1919) to the main general recommendation of the Women's Housing Sub-Committee, viz., that small working-class houses should be so planned that no cooking or "kitchening" work is done in the living-room. The living-room must be reserved for its true and proper purpose as a clean and cosy but every-day sitting and meals room; in other words, for living in; "all hard and dirty work being done in the kitchen-scullery." *

* *Vide* the Final Report of the Women's Housing Sub-Committee.

This resultant design gives a plan which, officially, comes under the heading of a "non-parlour" type of plan, but which, in reality, provides a real good "live-in-able" parlour of ample size and convenience.

Examination of the plan will at once show that it is in every way not only far more convenient and roomy than any of the officially recommended plans published in the Manual of the Local Government Board, but also much more compact and, therefore, it must be proportionately more economical to build. At 1s. per cubic foot the cost works out at only about £525 per house, but, in view of the fact that the floor areas of the rooms provided are all (without exception) considerably greater than those recommended by the Local Government Board (the average floor space provided being nearly 40 per cent. greater), at any price up

:: DESIGN FOR GROUP OF FOUR COTTAGES ::



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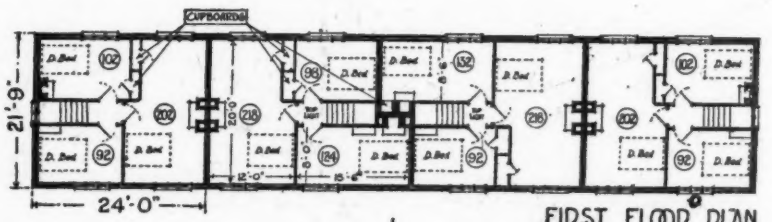
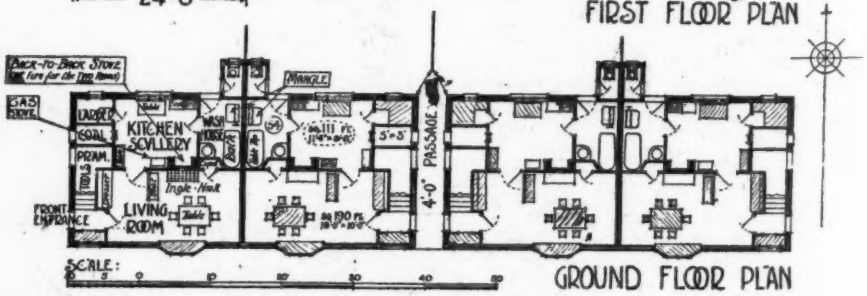


FIRST FLOOR PLAN

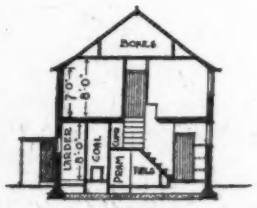


GROUND FLOOR PLAN

COMPARATIVE TABLE
SHEWING
SIZES OF ROOMS RECOMMENDED BY THE L.G.B.
AS COMPARED WITH
ACTUAL SIZES OF ROOMS IN ABOVE PLANS

	L. G. B.	IN ABOVE PLANS
LIVING ROOM	180 SQ. FT.	190 SQ. FT.
SCULLERY AND WASH-HOUSE	80 . .	165 . .
1ST BEDROOM	150 . .	218 . .
2ND BEDROOM	100 . .	132 . .
3RD BEDROOM	65 . .	92 . .

CUBIC CONTENTS OF ONE COTTAGE
CUBIC 10,500 FEET
@ 1/- PER CU. FT. = £525.



SECTION

L. J. REDGRAVE CRIPPS
ARCHITECT. :: DINAS POWYS

to £700 per house the adoption of this design must represent a very considerable saving, probably at least £100 per house, as compared with other designs giving the same large amount of accommodation. Thus, in a housing scheme of, say, 100 houses, the adoption of this plan would mean a saving of quite £10,000 and upwards.

The main feature of the plan is the adoptoin and application to the best advantage of the patent combination (back-to-back) stove for the living-room and kitchen, whereby all the cooking and also all the heating of the two rooms is done by one fire. Thus, not only is there effected a very considerable saving of money, space, and labour, but this arrangement also permits of the living-room being always used for its true and proper purpose, as explained above. The suggested high-backed seat in the living-room, as shown on the plans, would have the effect of forming a cosy inglenook, where the family could sit in comfort around the fire (the same fire that also heats the cooking stove in the kitchen-scullery) without being in any draught or in anyone's way, or being disturbed by the opening of any door. The apparent difficulty of connecting the living-room flue with the bedroom flues above is explained by the fact that only one flue from the combination stove is necessary, and this is simply arched over, out of sight in the cupboard, into the flue on the party wall above.

It should be noted that all furniture and portable equipment has been placed in the right relation to all kitchen and wash-house processes, so that (as advocated in "The Efficient Home") the housewife's work may "proceed in progressive step-saving track." Note, for instance, the convenient arrangement of having the wash-house separate from the scullery, and the handy position of the bath (with table-top) with the copper and mangle adjacent. Note also the "workable" position in the kitchen of the gas stove, the sink—with draining-board on one side and table on the other—and the separate and handy serving-table near door leading into the living-room. Another labour-saving feature is the planning of the coal store so that although it can be stacked from the outside (thus avoiding all dirt and dust in the house) yet the coals are readily accessible (by means of a small sliding hatch) direct from the kitchen, and without going out of doors.

The rooms on both floors are not only all exceptionally large, but they are also all of a good, regular, rectangular and convenient shape, so that the very most is made of the floor area. The best bedroom in each house has the great advantage of having a window both back and front, thus effecting through lighting and through ventilation. There is really ample space in these best bedrooms for (if necessary) an additional double-bed, or these rooms could well meet the great need in this class of house of providing a bed-sitting room or study.

The whole of the plumbing and drainage work is as compact as possible, thereby effecting a considerable saving in cost. The staircase is of good width (3 feet) and well lighted. A half-space landing is provided, but there are no "winders," which are always so objectionable. The upstairs landing is reduced to a minimum, thus giving all available space to the three bedrooms. It will be seen that most ample cupboard accommodation has been provided, both on the ground floor and first floor. All cupboards are so planned as to be non-projecting. Finally, the design readily permits of the houses being built either in pairs or in groups of four or more.

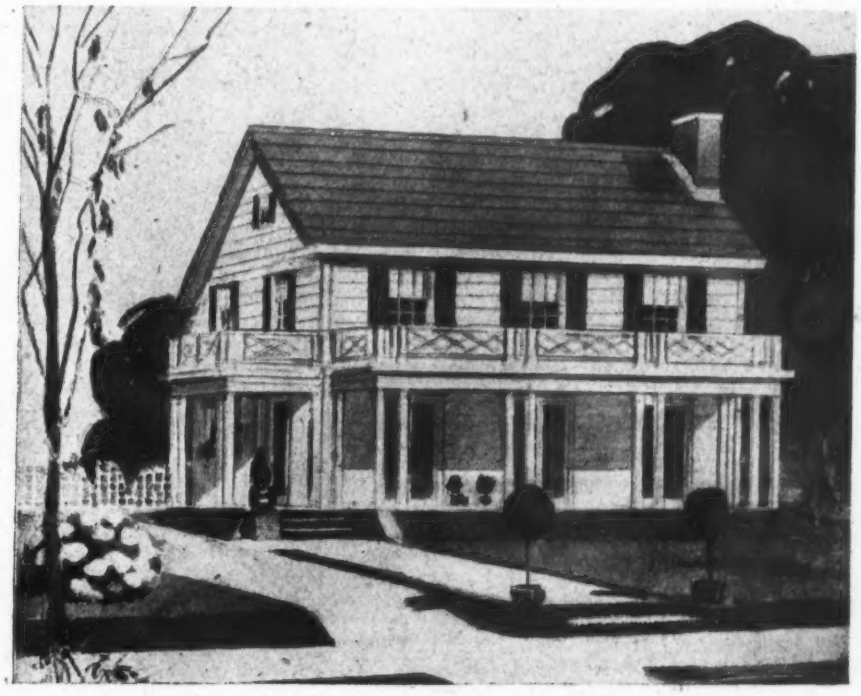
The British Industries Fair, 1920.

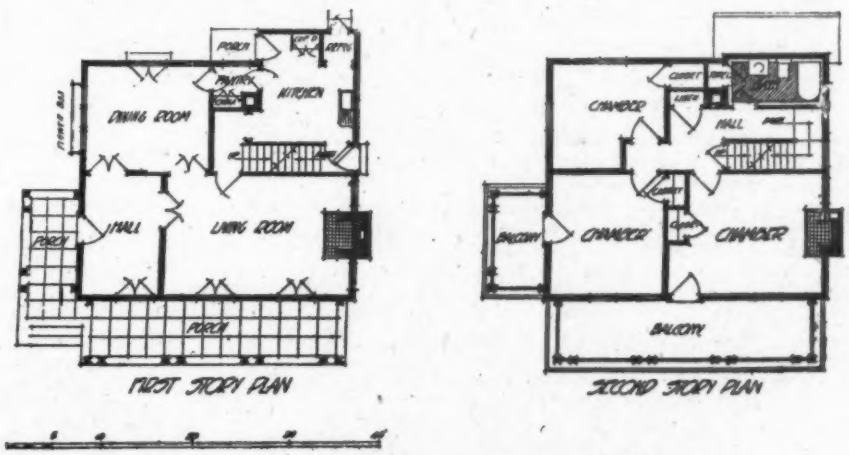
We understand the Board of Trade is sending out over 100,000 invitations to buyers at home and abroad to attend the British Industries Fair, 1920. In Birmingham, the Chamber of Commerce and Municipality are jointly responsible for the organisation of this section of the Fair. The Fair will be divided into three sections—London, Birmingham, and Glasgow.

BOOKS.

The Cheap Cottage and Small House. By Gordon Allen, F.R.I.B.A. (London: B. T. Batsford, Ltd. Price 8s. 6d. net).—A sixth edition of this book has been called for and is now before us; the revision practically makes the work a new one and it includes illustrations from several housing schemes. There is, perhaps, little or nothing that will be new to our readers in these days of extensive publicity, but probably it will have a greater interest for the general public. A great many of Mr. Allen's own designs are given, and these, shown on pages 21, 22, 25 and 32, deserve special note; but the architect cannot hope to escape the criticism of the householder when he finds a transom bar just about level with the eye as in the fig. 35 of the Crayford Garden Village. Much useful detailed information is given as to the cottage design generally, and the following remarks are so good that we reproduce them:—

"When a pale-faced city clerk wishes to return to the land of his fathers with his country-bred wife, and to build one of those comfortable and artistic tile-hung or weather-boarded houses in the middle of his field—where he and the man from the office used to spend their fortnight under canvas with pleasure to everyone, including the village shop and the neighbouring farm—he is told by the authorities that the dwelling cannot be allowed, as it is 'unfit for human habitation.' Or possibly, instead of the clerk, some thrifty smallholder, or perhaps a more well-to-do 'week-ender,' wishes to put up a corrugated-iron or an expanded-metal and roughcast bungalow, the foundations and chimneys being of brick. Whoever they be, the chances are that they fare no better with the local council, who very likely has just proudly completed a smallpox hospital of the identical materials disallowed for the cottage! Although there are some who may see humour in the fact that Government buildings and those 'for His Majesty's use and service' are carefully exempted from the by-laws, it is certain that among these will be neither our London clerk nor his country-bred wife as they look out for fresh lodgings in Peckham. Again, if millionaires and other well-off folk can live and sleep in shooting-boxes and golf-houses in the Highlands and elsewhere, and if firemen, policemen and soldiers, as well as the retainers of crowned heads and royalty, are housed comfortably both in town and country in buildings made of certain materials, why is a cottage similarly constructed in a meadow 100 yards from the nearest dwelling so shockingly insanitary and dangerous? It would be extremely inconvenient if a rather wealthy back-to-the-lander, after having refused to submit to the tyranny of the by-laws, had his case tried in one of the courts erected a few years ago in the Judges' Quadrangle of the Strand Law Courts. No doubt the prosecuting councilmen would decline to enter the building because it is constructed neither of 'brick, stone or incombustible materials,' but of iron, plaster, and wood!"





Wooden House at Cleveland, Ohio.
Messrs. Fountain and Moratz, Architects

HOUSING AND TOWN-PLANNING NOTES.

London.

In its report to the London County Council on Tuesday, the Housing Committee stated that it viewed with great alarm the adaptation of huts for use as permanent dwellings in the London area, on account of the fire risk, and expressed the opinion that such huts should only be used temporarily. With reference to the conversion of houses into flats, the Committee recommended the Council not to give any general instructions for the relaxation of the Building Acts or by-laws, but to give sympathetic consideration to specific applications during the present emergency. A resolution was passed assenting to the relaxation of the by-laws in some particulars, but declaring that it was very undesirable that there should be any relaxation in the provisions relating to the width of streets, culs-de-sac or the height of habitable rooms.

Mr. James P. Orr, C.S.I., was appointed director of housing, at a salary of £2,000 per annum, for two years.

Northampton.

The Housing and Town-Planning Committee has recommended the Town Council to acquire land at Abingdon Farm, at a cost of £19,500, for the erection of working-class dwellings.

Edmonton.

The engineer to the Urban District Council has prepared a scheme for the erection of 2,000 working-class houses at the Hyde Estate, Lower Edmonton. The total cost is estimated at £2,000,000.

Westmorland.

The South Westmorland Rural District Council has appointed Mr. Malcolm G. Shaw, Lic. R.I.B.A., architect in connection with its housing scheme for the erection of about 150 houses.

Dublin.

When the proposed loan of £150,000,000 for Irish housing purposes was discussed at a meeting of the Dublin Town Council on Monday, several members expressed their doubts as to whether the money would be forthcoming. It was decided to adhere to the original request for £1,000,000 for Dublin housing schemes.

Rapid House Construction.

In view of the Press controversy as to the merits of various forms of building construction and materials advocated for speeding up the supply of houses, especial interest attaches to a meeting of the Society of Architects, to be held at 28, Bedford-square, W.C., on October 16, at 8 p.m., when Sir Charles Ruthen, O.B.E., a member of the Council of the Society, will explain the nature of the experiment which he has made in rapid house construction in South Wales. In his view, the five essentials in housing at the present moment are rapid construction, weather-proof qualities, strength, lasting qualities, and cost. There is nothing new about the system, which is simply wood framing adapted to British climatic conditions inside and outside, by means of bitumen vermin-proof sheeting with laths fixed to the framework, treated on the outside with cement roughcast or brick veneer, and on the inside with plaster, the roof being slated or tiled according to taste or locality. It is claimed that the houses so constructed have the important advantage over the vast majority of brick and stone houses of being cool in summer and warm in winter, and are probably much more suited to this climate than the type of wooden house so popular in Canada. The meeting will be open to anyone interested in the question.

WEEKLY HOUSING RETURN.

The return of housing progress, issued weekly by the Ministry of Health, states that the number of new schemes submitted during the week ended September 27 was 93, bringing the total number of schemes submitted by local authorities and public utility societies to 5,105. The total number of schemes approved is 1,723. The number of house-plans submitted is 633, representing 36,464 houses. House-plan schemes representing 22,649 houses have been approved.

Details of local authorities' schemes dealt with during the week are as follows :—

Building Sites.

Schemes Submitted.—The number submitted by 45 local authorities was 92, bringing the total to 5,037, covering approximately 43,000 acres. The new schemes are as follows :—

URBAN.	ACRES
Liverpool	63.00
Stalybridge (3 sites)	36.50
Stanley	31.50
Merthyr Tydfil	28.33
Frome (7)	26.00
Rochester	25.00
Hanwell	16.75
Seaton Delavel (3)	12.00
Goole	11.75

Beaumaris, 2.24; Bridlington, .73; Buckhurst-hill, .25; City of London (3), 3.03; Darlaston (2), 4.03; Hollingworth, 2; Holme Cultram (7), 2.74; Marlborough, 1.3; Nelson, .34; Paignton, 2.12; Rochdale, 4.11; Saltburn-by-the-Sea, 3.16; Sutton-in-Ashfield, 8.28; Waltham Holy Cross, 2; Wilton, 2.

RURAL.	ACRES.
Northwich	34.90
Dartford (6 sites)	23.83
Chester (14)	16.82
Walsall (4)	15.88
Wakefield (2)	11.90
Cheadle	10.75

Brailes (2), 1.50; Depwade (1); Dolgelly, 2.03; Dunmow, 6.12; Forehoe, 2.74; Hayfield, 7.86; Howden, 1; Longtown, 7.84; Melford (3), 5.62; Northallerton (2), 6.96; Penybont, 8.67; Swavesey (2), 3.45; Tendring, 2.1; Warminster (2), 4.5; Westbury and Whorwellsdown, 0.5.

Schemes Approved.—Eighty schemes were approved, comprising 556.56 acres. This brings the total to 1,704, covering approximately 20,000 acres. The schemes newly approved were as follows :—

URBAN.	ACRES.
Liverpool	188.00
Merton and Morden	35.25
Worsley (2 sites)	34.18
Bootle	28.62
Uxbridge	27.38
Abingdon	22.22
Brandon and Byshottles	15.75
Bournemouth	13.85
Henley-on-Thames	13.47
Luddenden Foot	12.93

Banbury, 1.9; Cheadle and Gatley, 3.22; Chorley Wood (2 sites), 2; Golcar, 1.33; Hazel Grove and Bramhall, 4; Littlehampton, 6.11; Luddenden Foot, 12.93; Midsomer Norton, 2.87; Newport Pagnell, 1.48; New Windsor, 5.11.

RURAL.	ACRES.
Bradfield (10 sites)	22.15
Biggleswade (7)	18.39
Houghton-le-Spring	10.00

Buckingham (3), 8.12; Chipping Norton, 9.72; Clare (4), 3.25; Crowmarsh, 1; Depwade, 2; Doncaster, 7; Dorchester, 1; Henley, 2; Hungerford (2), 3; Huntingdon, 1; Keynsham, 1; Market Harborough, 4.07; Newport Pagnell, 1 66; Oxenden (3), 3.66; Pontefract, 1.04; Ringwood, 7 72; Romford, 2 29; St. Austell, .79; Stratford-on-Avon (7), 6; Southwell (2), 4.07; South Westmorland, 4.58; Wincanton (3), 7.03; Wirral, 1.

COUNTY COUNCIL.—Worcester, 0.75.

Lay-Outs.

Schemes Submitted.—During the week 53 schemes were submitted by 34 local authorities, bringing the total to 949. The new schemes were as follows :—

URBAN.—London County Council, Appleby, Arlecdon and Frizington, Ashington, Cambridge, Dawlish, Elland, Great Berkhampstead, Leyland, Little Hulton, Margam, Middleton, Nelson, Rawdon, Scunthorpe, Stretford, Teddington, Warwick, Whittington and Newbold.

RURAL.—Atcham (2 sites), Aylesbury, Chester-le-street, Darlington (5), Depwade, Frome (5), Huntingdon, Lymington, Middleton Cheney, Romford (2), St. Ives (10), Sisdon, South Westmorland, Tendring, Warmley.

Schemes Approved.—The following schemes, promoted by 25 local authorities, were approved, bringing the total to 504 :—

URBAN.—Banbury, Caerphilly, Cambridge, Little Hulten, Merthyr Tydfil (4 sites), Morpeth, Panteg, Rhymney, Tynemouth, Wallasey, Warwick, Wigton.

RURAL.—Atcham (2 sites), Biggleswade (7), Bourne, Brackley (2), Bradfield, Buntingford, Depwade, Grantham (4), Henstead, Leigh, Selsdon, Tendring, Walsingham (2).

House Plans.

Schemes Submitted.—Schemes representing 1,215 houses were submitted by 24 local authorities; this brings the total to 603, and the number of houses to 31,821. The new schemes are as follows :—

URBAN.—Adwick-le-Street, 64 houses; Cambridge, 129; Eston, 12; Golcar, 16; Great Berkhampstead, 20; Hornsea, 8; Manchester (part scheme), 80; Margam, 40; Nelson, 13; Oakengates, 70; Reading, 14; Whittington and Newbold, 22; Wombwell, 384.

RURAL.—Atcham (2), 8 houses; Aylesbury, Cricklade and Wootton Bassett, 6; Depwade, 1; Durham, 54; Penrith, 118; St. Ives (2), 30; Seisdon, 50.

COUNTY COUNCILS.—Hertford (13), 14; Huntingdon (6), 24; London, 18.

Schemes Approved.—Schemes promoted by 28 local authorities were approved, bringing the total to 381. The schemes newly approved are as follows :—

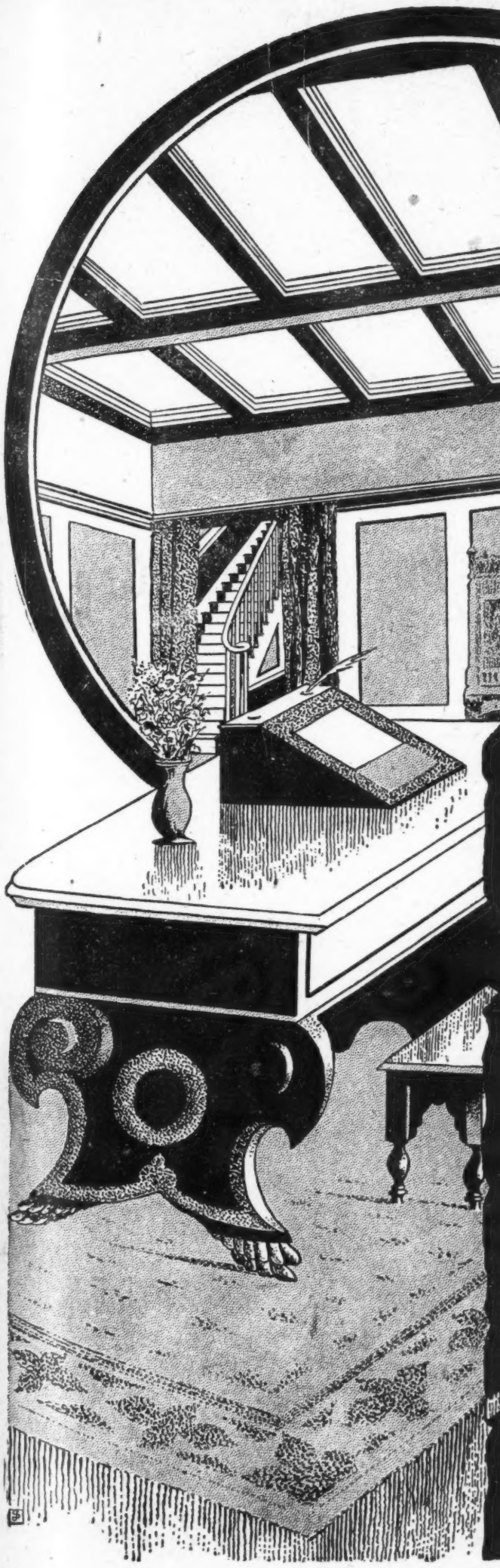
URBAN.—Caerphilly, 50 houses; Cambridge, 129; Hornsea, 8; Ipswich, 20; Little Hulton, 43; Malton, 16; Manchester (part scheme), 80; Morpeth, 72; Nelson, 13; Oakengates, 70; Panteg, 80; Rhymney, 150; Seaham Harbour, 12; Southport, 98.

RURAL.—Atcham (2 schemes), 8 houses; Biggleswade (3), 46; Bourne, 6; Bradfield, 12; Buntingford, 4; Depwade, 1; Grantham (2), 8; Huntingdon (2), 14; Pontefract, 80; Seisdon, 50; Tendring, 8; Thame, 4; Walsingham (2), 12.

COUNTY COUNCIL.—Huntingdon, 2 houses.

From the War Memorials Exhibition.

Memorial Tablet to Lieut. E. W. Tennant.
By Mr. ALLAN G. WYON.



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OF THE
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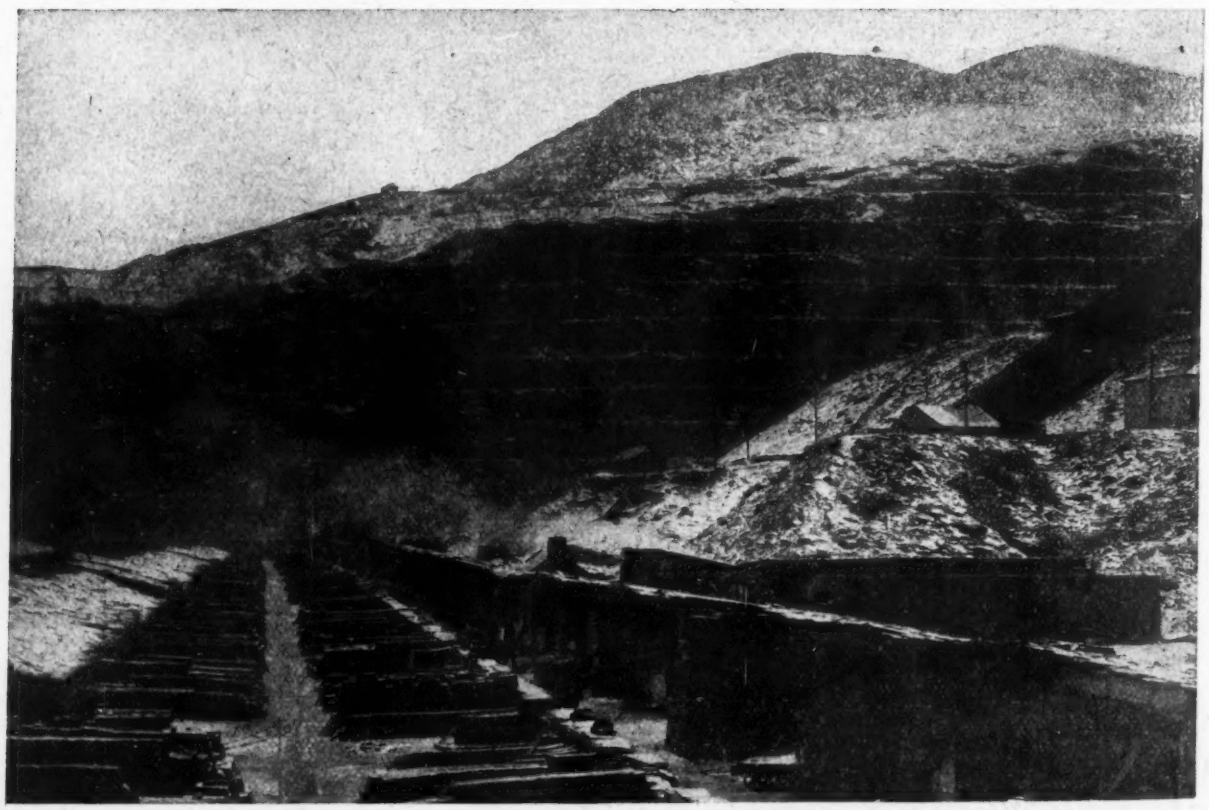

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CONCRETE COTTAGES.

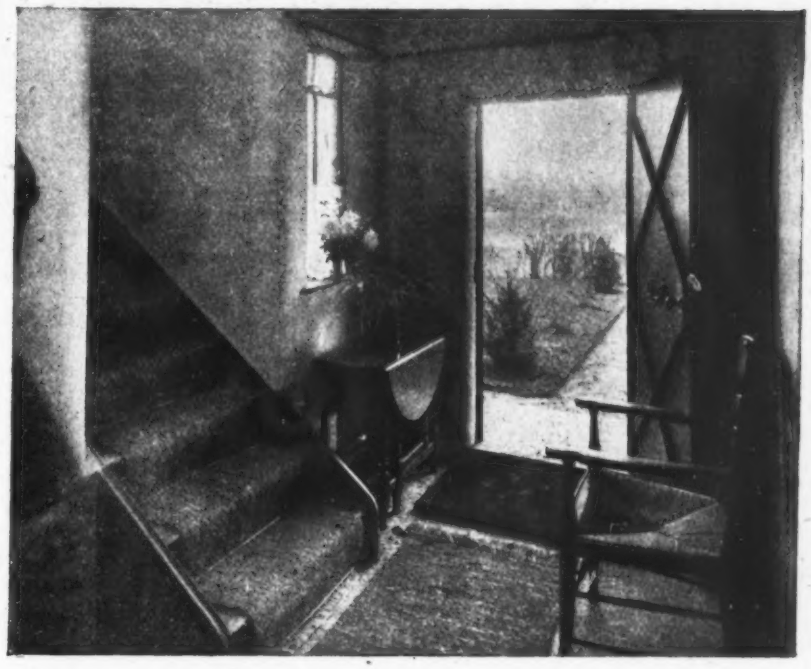
WE recently had an opportunity of inspecting an estate which is being developed for a local public utility society at Braintree, Essex, by the Unit Construction Co., Ltd. (of 246, High Holborn, W.C.). The construction is standardised on the "unit" system, by which the whole of the floors and walls are divided into units. The unit of measure adopted is the metre, and the concrete blocks, window openings, doorways, &c., are made of such dimensions as to be multiples of the metre. The blocks are made to measure ½ by ¼ by ⅛ of this unit, the doorways equal 2 units, and so on. By this method a great deal of cutting and waste are dispensed with, and the necessity for making blocks of various sizes is avoided. The method is best illustrated by reference to the plan given on this page. The external walls and party walls are built hollow, the sides being tied together with wrought iron or steel rods at 3 ft. intervals at alternate courses. The cavity is continuous, and gratings fixed just above the damp course and under the eaves, provide a continuous air current. The foundations of the walls are of concrete 9 in. thick, and the damp course consists of two courses of slates set in cement. The partition walls are of 4⅛ in. solid blocks. The ground floor is 5 in. thick, and the first floor of 4½ in. concrete, reinforced with expanded metal. With the exception of the scullery and larder, which are of cement trowelled to a fine surface, the floors are covered with a jointless composition.

The use of wood, except for the internal doors, has been practically eliminated, steel being used for the window frames, front and back doors, staircase, mantel-shelves, built-in cupboards and door frames. All the steelwork is enamelled green, and is very easy to keep clean; but it appears to be liable to chip off with use, judging by some of the mantel-shelves of houses which had been in occupation for some months. The steel stairs, with a covering of carpet are much more silent than would be expected, but the cupboard doors, if not opened and closed carefully, might be liable to clatter.

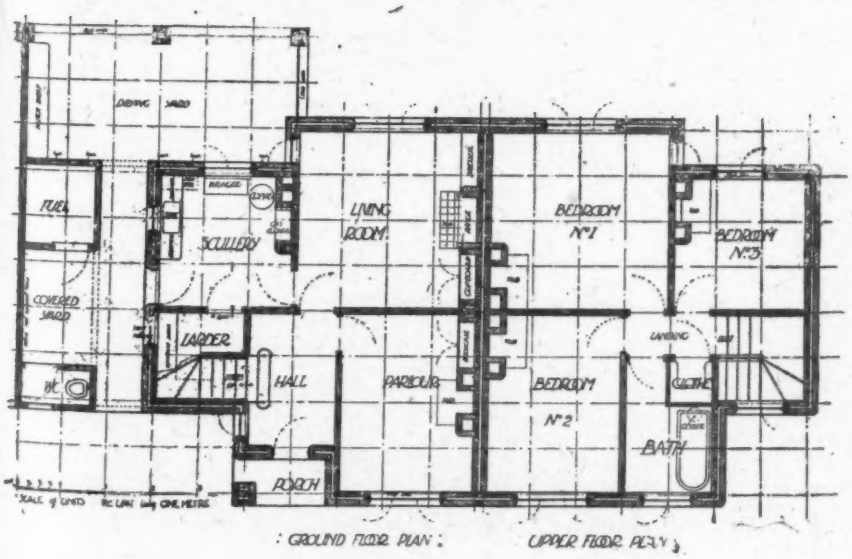
The site of the operations is ideal for the purpose of concrete construction Clean gravel and sand, which does not require washing, is excavated on the spot by a steam navvy, and carried to the mixing machine on a light railway The blocks are made in a machine which has been specially constructed for the Unit Co., and with three operators turns out 100 blocks per hour. The machine has moulds at each end, which, when filled, are run on rails to the centre, where the pressure is applied.

Altogether, one hundred houses are contemplated, together with recreation rooms, bowling greens, allotments, &c. Two houses have been in occupation for about six months, and thirty others are in course of erection. All the houses are to have flat roofs, which, it is stated, will effect an economy of £28 over similar houses with sloping slate roofs.

The houses illustrated herewith, subject to the conditions, site, &c., being satisfactory to the contractors, and to variations in the price of materials and labour, are erected at a cost of £678 each, in estates of not less than 100 houses, with an additional charge of £40 for outhouses, cement courts, &c. With good conditions, and on a large scheme, 100 such houses can be erected in seven months. Mr. C. B. Quennell, F.R.I.B.A., is the architect.



Concrete Cottages at Braintree, showing Steel Staircase and Door.



Concrete Cottages at Braintree.

Professional Training for Ex-Service Men.

In response to a suggestion from the Ministry of Labour that members of the Society of Architects should take suitable ex-service candidates into their offices as non-premium pupils, the Council points out that the private pupilage system is being rapidly superseded by the architectural school, which offers wider educational facilities, especially if leading to further training on Beaux Arts' lines. The Society has long advocated the establishment in this country of a Ministry of Fine Arts for the support, *inter alia*, of a national school of architecture. This proposal has recently been supported by prominent public men and well-known architects, with a view to an application being made for the support of the Board of Education. A Government grant in aid of ex-service men at recognised architectural schools might well be the first step in this direction. It should, however, be made clear to potential candidates that years of arduous and expensive training are an essential preliminary to entering the architectural profession, and while there are reasonable prospects of success for qualified architects, there is no room for the unskilled.

Deptford War Memorial.

A scheme is being promoted locally to erect a monument on a prominent site, and to provide a children's ward at the Miller General Hospital for South-east London, as a memorial to the men of the borough who fell in the war.

THE BUILDING TRADE.

PHYSICAL PROPERTIES OF MORTARS AND CONCRETES.

REVIEWING the work done by other investigators, and describing experiments carried out for the Greater Winnipeg Water District, of which he is the Laboratory Engineer, Mr. H. M. Thompson, in the *Canadian Engineer*, says that sand is usually considered to be the fine aggregate which will pass a screen having four meshes per linear inch, but the term "sand" is a relative term, and depends on the maximum size of stone used in the aggregate, For a mixture of maximum density, the stone portion of the aggregate should be graded according to a straight line, and the sand and cement portion of the mix corresponds to an elliptical curve. The junction between the straight line and the ellipse occurs at a point one-tenth diameter of the maximum size of stone in the aggregate. The meaning of the term "sand" will, therefore, vary according to the maximum size of stone used in the aggregate.

The first procedure in testing a sand is to make a mechanical analysis of the sand. The sieves used in the Water District's laboratory in the grading of a sand are No. 10, No. 20, No. 40, No. 75, No. 100 and No. 200; the numbers referring to the number of meshes per linear inch. From such an analysis, one familiar with sands can form an opinion as to its suitability or otherwise for concrete work, and also make a close prediction as to the possible strength obtainable from mortars made from such a sand. The grading of sand has a very marked effect on all its characteristics. Coarse sands require less water than fine sands to gauge them to any given consistency. This is readily understood when one bears in mind the relatively large amount of surface area per unit weight of the fine, as compared with the coarse, material, and that the surface of the sands must be wetted before they can be brought to the desired consistency. There have been many methods suggested whereby the best mixtures of cement, sand and stone for any given purposes can be determined. One of these methods is the arbitrary selection of volumes. For example 1:2:4 mixture, meaning 1 cubic foot of cement to 2 cubic feet of sand to 4 cubic feet of stone. A second method of proportioning is by determining the voids in the sand and providing enough cement paste to fill these voids, then calculating the voids in the stone and allowing enough mortar to fill the voids in the stone, using a little excess cement and also mortar over what is exactly required to fill these requirements. A third method is to make up compression specimens with various mixes and deciding on that mix which will meet the specifications as to strength and at the same time be a workable concrete. Yet another method has recently been suggested by Captain Edwards, of Toronto, namely, proportioning a definite weight of cement to a given surface area of aggregate.

There are many differences of opinion on the proper proportioning of concrete, and a method has yet to be found whereby we can tell just how far we can cut the cement in a mixture with safety, since so many factors enter into the problem of making good concrete, such as the amount of cement used, the nature of the aggregate, the sand content of the aggregate, the amount of water, time of mixing and the placing of the concrete. It has been pointed out that the actual volume of voids in a given volume of stone may not, and usually does not, correspond to the quantity of sand required to fill those voids. The use of this method, therefore, leads to false conclusions, the reasons for this inaccuracy being chiefly because with most aggregates a portion of the particles of sand or fine screenings are too coarse to enter the voids of the coarsest material. The individual voids in a mass of broken stone or gravel are many of them so small that a large number of the particles of bank-run sand will not enter them, but get between the stones and increase the bulk of the mass. The determination of the proportion of cement to sand by void measurement is still more misleading, and so inaccurate that he gives no consideration to it.

The supposition in determining the density of mortars is that the space occupied by the water filling the voids in the sand can be replaced by cement paste without increasing the bulk of the sand. This supposition is, of course, erroneous. According to this theory there is an exact and definite proportion of cement to sand at which the voids are filled with paste, and the mortar will have its maximum density at this proportion. The addition of more cement paste above this proportion will only result in a reduction in density, since cement paste itself has a low density. The addition of less cement paste than this amount will result in a reduction of density. But if one attempts to mix cement paste with dry sand it will be found that the sand abstracts water from the paste, and renders the mixture unworkable until sufficient water is added to wet the sand. This water must necessarily occupy space in the set mortar. It is obvious, therefore, that the amount of cement paste which can be added to a sand without increasing the volume of the sand is very small, and in a case where we have present in the sand considerable quantity of dust of a degree of fineness equal to that of cement, it is impossible to add any paste at all without increasing the volume of the sand. That there is no sharp and definite point at which the voids are just filled with cement paste would seem to be shown by actual tests.

The securing of mortar of absolute maximum density is not greatly to be desired, since, in many cases, a higher density can be secured from sand alone. In comparing densities of mixtures, it is essential that they be compared with the same cement content. The difficulty of securing reliable results in density tests can be realized from the fact that for any given mortars the amount of water used and the method of placing will greatly affect the position of the points on the density curve, the wetter mixes having a lower density. Cement will take up different percentages of water. The amount of water taken up by the sand also varies. If one attempts to make mixtures all of the same consistency, extreme difficulty is experienced in comparing the rich mixes with the very lean mixes. The absence of paste in a lean mix necessitates the addition of considerable water to make the mix workable, resulting in over-saturating both the cement and the sand, and when the mix settles a large quantity of water is thrown off, but also a considerable quantity of water is held in the mix over what is actually needed to gauge the cement and sand, resulting in a reduction in the density of the mixture.

A series of tests was made to obtain some data as to the effect of alkali solutions on mortars treated with soap and aluminium sulphate; 1:2 and 1:3 mortars were made, using the same sand throughout. One set was made without chemicals; one set contained one per cent. aluminium sulphate and one per cent. soap, and another set contained one per cent. aluminium sulphate and seven per cent. soap. The chemicals were added as a percentage of the mixing water. One series was cured 24 hours in the moist closet, and one set cured 48 hours in steam at 150 degrees F. These briquettes were placed in 10 per cent. $MgSO_4$ solution and in 10 per cent. Na_2SO_4 solution and in distilled water. The only mortar which resisted the attack by the alkali solutions was the 1:2 mortar, without the addition of chemicals and cured in a moist closet. The steam curing caused even this mortar to disintegrate. Action on the steamed briquettes was greater than on those not steamed. The addition of soap and aluminium sulphate decreased the strength of the mortars, and rendered them more liable to disintegration. The sand used was similar in grading to Indian Bay sand, which gives mortars of a relatively low density. The addition of bulky chemical precipitates, due to the soap and aluminium sulphate reactions, greatly disturbs the density of mortars from this sand. The reduction of density does not mean a more porous mortar, since the addition of cement to mortar usually reduces its density, but greatly decreases its porosity.

On making up neat cement paste with different percentages of water and allowing the paste to set, the writer has observed that water is rejected by the paste before a very wet consistency is reached, and it would not seem possible to make the cement hold more than a very limited amount of water unless the cement were prevented from setting by being beaten up into a colloidal state, in which form it would, of course, take up large quantities of water. But for ordinary methods of mixing by hand, the writer has been able to obtain only a slight variation in the amount of the cement required to make a cubic foot of paste.

The limit in the reduction of a sand content is dependent on the workability of the mix. The mix must not be too stony or it will be hard to place, and will cause the production of stone pockets devoid of mortar; but as much stone should be added as possible, consistent with the production of a workable mixture. The amount of cement to be used depends on the class of work. If strength is the primary consideration, sufficient cement should be used to give the desired strength as determined by making up compression specimens with various percentages of cement; bearing in mind also that the mixture must contain sufficient fine material to make it smooth working. If strength is a secondary consideration, some of the cement can be substituted with a fine sand or dust to supply the necessary amount of fine fattening material, thus giving workability to the mix and economising cement. Although such fine dust cannot be considered in any degree as a substitute for cement, its presence in a concrete mixture provides the necessary effect of richness in the mix, minimises the risk of the formation of stone pockets, helps to hold the cement evenly distributed throughout the mix and makes it possible to make workable mixes with a less ratio of water to total dust cement. If lean mixes are poured without the addition of such fine dust, the amount of cement paste or lubricating medium in the mix is small. To make such mixes flow into corners, excess water is usually added. The excess water tends to wash the sand grains free of cement, and the result is a mass of concrete full of porous areas. Once the mixture of materials is decided upon, it is essential that this mixture be so mixed and placed as to secure the maximum possible density with the selected mixture. To secure such a result with the present methods of placing concrete, the quantity of water can be cut down to a minimum, and special attention can be paid to the spading and working of the mass when placed: but beyond these precautions we are limited in the degree of compacting of the material to the head of concrete on the work. Near the surface there is practically no head, and to get the materials at the top as compact as possible the concrete should be spaded for a considerable time to overcome the inertia of the materials, and actually to push them into place.

We have received a copy of a pamphlet entitled "Down Draught Defeated," issued by Messrs. J. H. Sankey & Son, Ltd., of 74, Cheapside, E.C. 2. The Sankey chimney-pots which, it is claimed, prevent down draughts, are constructed with slats or louvres which direct the air upwards.

RATES OF WAGES IN THE BUILDING TRADE.

THE following are the present rates of wages in the Building Trade in the principal towns of England and Wales. It must be understood that, while every endeavour is made to ensure accuracy, we cannot be responsible for errors that may occur :—

	Masons.	Bricklayers.	Carpenters, Joiners.	Plasterers.	Slaters.	Plumbers.	Painters	Masons' Labourers.	Bricklayers' Labourers	Plasterers' Labourers.
Aberdare	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/4½	1/4½	1/4½
Accrington	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/3½–1/4½		
Altrincham	1/8½	1/8½	1/8½	1/8½	1/8½	1/8½	1/8½	1/4½–1/4½		
Ashton-under-Lyne	1/8½	1/8½	1/8½	1/8½	1/8½	1/8½	1/8½	1/4½–1/4½		
Barnsley	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/4½	1/4½	1/4½
Barrow-in-Furness	1/8½	1/8½	1/8½	1/8½	1/8½	1/8½	1/8½	1/4½–1/4½		
Barry	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/4½	1/4½	1/4½
Bath	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/4½	1/4½	1/4½
Bedford	1/1	1/2	1/2	1/1	1/1	1/1	10	10	10	10
Birkenhead	2/–½	2/–½	2/–½	2/–½	2/–½	2/–½	2/–½	1/4½	1/4½	1/4½
Birmingham	1/9½	1/9½	1/9½	1/9½	1/9½	1/8½	1/8½	1/6½	1/6½	1/6½
Bishop Auckland	1/9½	1/9½	1/9½	1/9½	1/9½	1/9½	1/9½	1/5½	1/5½	1/5½
Blackburn	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/3½–1/4½		
Blackpool	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/3½–1/3½		
Bolton	1/8½	1/8½	1/8½	1/8½	1/8½	1/8½	1/8½	1/4½–1/4½		
Bournemouth	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/3½	1/1½	1/1½	1/1½
Bradford	1/8½	1/8½	1/8½	1/8½	1/8½	1/8½	1/8½	1/5½	1/5½	1/5½
Bridgwater	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/2½	1/2½	1/2½
Brighton	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/5½	1/3½	1/3½	1/3½
Bristol	1/8½	1/8½	1/8½	1/8½	1/8½	1/8½	1/7½	1/5½	1/5½	1/5½
Burnley	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/3½–1/3½		
Burton-on-Trent	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/6½	1/4½	1/4½	1/4½
Bury	1/8½	1/8½	1/8½	1/8½	1/8½	1/8½	1/8½	1/4½–1/4½		
Cambridge	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/1	11½	11½	11½
Cardiff	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/4½	1/4½	1/4½
Chatham	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/5½	1/3½	1/3½	1/3½
Chelmsford	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/3½	1/1½	1/1½	1/1½
Cheltenham	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/4½	1/4½	1/4½
Chester	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/3½–1/3½		
Chesterfield	1/8½	1/8½	1/8½	1/8½	1/8½	1/8½	1/8½	1/5½	1/5½	1/5½
Colchester	11	11½	11½	1/–	11	1/–	9½	9½	8½	8½
Coventry	1/9½	1/9½	1/9½	1/9½	1/9½	1/9½	1/8½	1/6½	1/6½	1/6½
Crewe	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2½–1/2½		
Darlington	1/9½½	1/9½½	1/9½½	1/9½½	1/9½½	1/9½½	1/9½½	1/5½½	1/5½½	1/5½½
Derby	1/8½	1/8½	1/8½	1/8½	1/8½	1/8½	1/7½	1/5½	1/5½	1/5½
Doncaster	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/4½	1/4½	1/4½
Dudley	1/6½	1/6½	1/6½	1/6½	1/6½	1/3	1/1	1/3½	1/3½	1/3½
Durham	1/9½½	1/9½½	1/9½½	1/9½½	1/9½½	1/9½½	1/9½½	1/5½½	1/5½½	1/5½½
East Glam. and Mon. Valleys	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/4½½	1/4½½	1/4½½
Exeter	1/3	1/3	1/3	1/3	1/3	1/3	1/2	1/1	1/1	1/1
Folkestone	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/2½	1/–½	1/–½	1/–½
Gloucester	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/3½	1/3½	1/3½
Grantham	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/3½	1/3½	1/3½
Grays	1/7½½	1/7½½	1/7½½	1/7½½	1/7½½	1/8½	1/6½½	1/.½	1/3½½	1/3½½
Grimsby	1/8½	1/8½	1/8½	1/8½	1/8½	1/8½	1/8½	1/5½	1/5½	1/5½
Great Yarmouth	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/1½½	11½	11½	11½
Guildford	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/5½	1/3½	1/3½	1/3½
Halifax	1/8½	1/8½	1/8½	1/8½	1/8½	1/8½	1/8½	1/5½	1/5½	1/5½
Harrogate	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/4½	1/4½	1/4½
Hartlepools	1/9½½	1/9½½	1/9½½	1/9½½	1/9½½	1/9½½	1/9½½	1/5½½	1/5½½	1/5½½
Hastings	1/–½	1/–½	1/3½	1/3½	1/3½	1/–½	1/2½	1/–½	1/–½	1/–½
Hereford	1/–½	1/4½	1/4½	1/4½	1/4½	1/4½	1/3½	1/2½	1/2½	1/2½
Huddersfield	1/8½	1/–½	1/8½	1/–½	1/8½	1/8½	1/8½	1/5½	1/5½	1/5½
Hull	1/8½	1/8½	1/8½	1/8½	1/8½	1/8½	1/8½	1/5½	1/5½	1/5½
Ipswich	1/3½	1/3½½	1/3½½	1/4½	1/4½	1/4½½	1/2½	1/1½	1/1½	1/1½
Lancaster	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/3½–1/3½½		
Leamington Spa	1/–½	1/7½	1/7½	1/7½	1/7½	1/7½	1/6½	1/4½	1/4½	2/4½
Leeds	1/8½	1/–½	1/–½	1/–½	1/8½	1/8½	1/8½	1/5½	1/5½	1/5½
Leicester	1/4	1/4	1/4	1/4	1/4	1/4	1/2	1/1½	1/1½	1/2
Lincoln	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3	10½	10	10½
Liverpool	2/–½	2/–½	2/–½	2/–½	2/–½	2/–½	2/–½	1/8½½	1/8½½	1/8½½
Llanelly	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/4½½	1/4½½	1/4½½
London	1/9½	1/9½	1/9½	1/4½	—	1/9½½	1/8½	1/5½	1/5½	1/5½
Loughborough	1/8½	1/8½	1/8½	1/8½	1/8½	1/8½	1/7½	1/5½	1/5½	1/5½
Luton	1/3½½	1/6½½	1/6½½	1/3½½	1/6½½	1/6½½	1/5½½	1/3½½	1/3½½	1/3½½
Maidstone	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/5½	1/3½	1/3½	1/3½
Manchester	1/8½	1/8½	1/8½	1/8½	1/8½	1/8½	1/8½	1/4.–1/4½		
Mansfield	1/3	1/3	1/3	1/3	1/3	1/3	1/2	1/0½	1/0½	1/1
Merthyr Tydfil	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/4½½	1/4½½	1/4½½
Middlesbrough	1/9½½	1/9½½	1/9½½	1/9½½	1/9½½	1/9½½	1/9½½	1/5½½	1/5½½	1/5½½
Newcastle-on-Tyne	1/9½½	1/9½½	1/9½½	1/9½½	1/9½½	1/9½½	1/9½½	1/5½½	1/5½½	1/5½½
Newport, Mon.	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/4½½	1/4½½	1/4½½
Northampton	1/3	1/3	1/3	1/3	1/3	1/3	1/2	1/0½	1/0½	1/0½
Norwich	1/3	1/3	1/3	1/3	1/3	1/3	1/2	1/0½	1/0½	1/0½
Nottingham	1/8½	1/8½	1/8½	1/8½	1/8½	1/8½	1/7½	1/5½½	1/5½½	1/6½
Oldham	1/8½	1/8½	1/8½	1/8½	1/8½	1/8½	1/8½	1/4½	1/4½½	
Oxford	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/4½	1/2½	1/2½	1/2½
Plymouth	1/8½	1/8½	1/8½	1/8½	1/8½	1/8½	1/7½	1/5½	1/5½	1/5½
Pontypridd	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/4½½	1/4½½	1/4½½
Portsmouth	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/3½	1/1½	1/1½	1/1½
Preston	1/7½	1/7½	1/7½	1/7½	1/–½	1/7½	1/7½	1/3½–1/3½½		
Reading	1/7½	1/6½	1/6½	1/6½½	1/7½	1/6½	1/4½½	1/3½	1/3½½	1/3½½
Rochdale	1/8½	1/8½	1/8½	1/8½	1/8½	1/8½	1/8½	1/4½–1/4½½		
Rochester	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/5½	1/3½	1/3½	1/3½
Rugby	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/6½	1/4½	1/4½	2/4½½
St. Albans	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/5½½	1/3½½	1/3½½	1/3½½
St. Helen's	1/–½	1/8½	1/8½	1/8½	1/–½	1/8½	1/8½	1/4½–1/4½½		
Scarborough	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/4½	1/4½	1/4½
Sheffield	1/8½½	1/8½½	1/8½½	1/9½½	1/9½½	1/9½½	1/8½	1/–½	1/5½	1/5½
Shrewsbury	1/–½	1/7½	1/7½	1/7½	1/7½	1/7½	1/6½	1/4½	1/4½	1/4½
Southampton	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/3½	1/1½	1/1½	1/–½
Southend-on-Sea	10	10	10	10	P'cework	10	9	8	8	8
Southport	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/3½–1/3½½		
South Shields	1/9½½	1/9½½	1/9½½	1/9½½	1/9½½	1/9½½	1/9½½	1/5½½	1/5½½	1/5½½
Stockport	1/8½	1/8½	1/8½	1/8½	1/8½	1/8½	1/8½	1/4½–1/4½½		
Stockton-on-Tees	1/9½½	1/9½½	1/9½½	1/9½½	1/9½½	1/9½½	1/9½½	1/5½½	1/5½½	1/5½½
Stoke-on-Trent	1/–½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2½½	1/2½½	1/2½½
Stroud	1/4½	1/4½	1/4½	1/4½	1/–½	1/4½	1/3½½	1/2½	1/2½	1/2½
Sunderland	1/9½½	1/9½½	1/9½½	1/9½½	1/9½½	1/9½½	1/9½½	1/5½½	1/5½½	1/5½½
Swansea	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/4½½	1/4½½	1/4½½
Taunton	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/2½	1/2½	1/2½
Torquay	1/–½	1/–½	1/3½	1/3½	1/3½	1/3½	1/3½	1/1½	1/1½	1/1½
Wakefield	1/–½	1/8½	1/8½	1/–½	1/–½	1/8½	1/–½	1/5½	1/5½	1/5½
Walsall	1/8½	1/8½	1/8½	1/8½	1/8½	1/8½	1/7½	1/5½	1/5½	1/5½
Warrington	1/8½	1/8½	1/8½	1/8½	1/8½	1/8½	1/8½	1/4½–1/4½½		
West Bromwich	1/3½	1/8½	1/8½	1/8½	1/8½	1/8½	1/8½	1/4½½	1/4½½	1/5½
Wigan	1/7½½	1/7½½	1/7½½	1/4	1/3½	1/7½½	1/5½½	1/4½– /4½½		
Windsor	1/8½	1/8½	1/8½	1/8½	1/8½	1/8½	1/8½	1/0½	1/0½	1/0½
Wolverhampton	1/4	1/4	1/4	1/4	1/4	1/4	1/2½	1/4½	1/4½	1/4½
Worcester	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/5½	1/1½½	1/1½½	1/1½½
York	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/2½	1/4½	1/4½	1/4½
	1/7½	1/7½	1/7½	1/7½	1/–½	1/7½	1/7½	1/4½	1/4½	1/4½

The Masons' rate given is for bankers: fixers usually ½d. per hour extra. * War bonus of 2s. per week granted. † War bonus of 3s. per week granted. ‡ War bonus of 3s. 6d. per week granted. ‡‡ War bonus of 5s. per week granted. ¶War bonus of 7s. 6d. per week granted. § These rates include the 12½ per cent. bonus. [The above rates, unless otherwise shown, are exclusive of 12½ per cent. bonus.—ED.]

LAW REPORT.

Plasterers and Trade Unions.

In the Shoreditch County Court, before his Honour Judge Cluer, Tom Rydon, West Green, a plasterer, sued Mr. Woolf, of Stoke Newington, a builder, to recover £3 14s. 4½d., being the amount alleged to be due as wages for 42½ hours. The plaintiff said he was sent to a job at Tottenham, and did the work for which he claimed. Defendant said the plaintiff asserted that he had been working 13½ hours a day, which was an impossibility. Judge Cluer: I have often worked considerably more. Defendant: But the trade union would not allow him to work more than a 50-hour week, and he could not claim it. Judge Cluer: Never mind what the trade union says about the matter. If they say he cannot claim for work he has done, they are talking nonsense. This man has obviously done his work and must be paid. There will be a verdict for the plaintiff for the amount claimed, with costs. The defendant asked for the case to be adjourned to enable him to call further evidence, but his Honour declined to listen to the suggestion, saying "the man has been kept out of his money long enough."

Building Regulations.

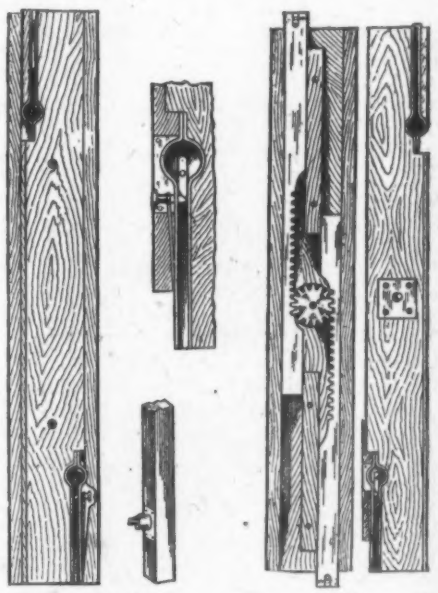
We understand that alterations and additions to the existing building regulations and by-laws have been agreed to by the Ministry of Health, and will be issued shortly.

The Site of Caerwent.

The Government is being urged to purchase the site of the remains of the old Roman city of Caerwent, which the Lysaght Trustees have announced their intention to sell. The walls, which are about 25 ft. in height, are still to be seen, and two of the four gateways are almost intact. Foundations of public and domestic buildings, baths, temples, mosaic floors, &c., have been unearthed on the spot from time to time.

The "Automatic Combination" Window.

The feature of this sash window is that by a rack and cog-wheel movement, illustrated herewith, the raising of the lower sash lowers the upper one in the same proportion. It



will only open a few inches vertically, when it locks automatically—it can thus be left open with as much security as if it were closed and bolted. A catch on either side of the frame releases the sash from the vertical, and enables the window to be swung open if desired, or for cleaning. The sash is the invention and patent of Mr. Frederick Self, of "Oakleigh," Horley, Surrey, who is willing to consider offers from firms with a view to placing it on the market.

PROPOSED NEW BUILDINGS AND OTHER WORKS.*

In these lists care is taken to ensure the accuracy of the information given, but it may occasionally happen that, owing to building owners taking the responsibility of commencing work before plans are finally approved by the local authorities, "proposed" works, at the time of publication, have been actually commenced. Abbreviations:—T.C. for Town Council; U.D.C. for Urban District Council; R.D.C. for Rural District Council; E.C. for Education Committee; B.G. for Board of Guardians; L.C.C. for London County Council; B.C. for Borough Council; and P.C. for Parish Council.

BOLTON.—Plans passed for T.C.: J. Porritt, Garage, 24, Chorley New-road; J. Dickinson & Co., extension to offices, Fairclough-street; The Eagle Spinning Co., Ltd., hoist and gangway, John-street; Tootal, Broadhurst, Lee & Co., Ltd., laboratory, Barrier-street; Hodgkinson & Gillibrand, Ltd., shed, Hickory-street; Brown & Fallows, Ltd., roof over transporter, Gas-street; Harry Peers & Co., extension to works, High-street; J. Jackson & Son, motor house, Spa-road; N. Isherwood & Co., alterations to premises, Salop-street; Major E. Challinor, alterations to warehouse, Ormrod-street; J. Hindley & Sons, shed and store, Bury-street.

BRISTOL.—The Docks Committee have let sites to the British Petroleum Co., J. Sheerman & Co., and Wilkinson, Heywood & Clarke, Ltd.

CHATHAM.—The Chatham Corporation has decided to proceed with its housing scheme immediately. Three hundred cottages are to be built.

CHESTER.—It is reported that the whole of Earl Howe's Curzon Park estate at Chester has been acquired by a syndicate for the development of trade purposes, possibly in connection with steel and iron manufacture.

EAST HAM.—Plans passed by B.C.: Steel framed garage, etc, Pleshet-lane, for Renovations, Ltd.; sanitary improvements, "Manor House" off-licence, for Mr. C. A. Nicoll; new boiler house, Cairn Mills, Silvertown, for Loders & Nucoline; Electric Picture House, adjoining existing Premier Theatre, High-street North, for Premier Electric Theatres, Ltd.; lavatory accommodation, Manor Park-road, for H. & A. T. Burton; alterations, High-street South, for Dr. Sampey; conversion of stables to bakehouse, High-street North, for W. T. Scriven; garage, Empress-avenue, for C. Northfield; conversion of shop, 375, High-street; entrance to timber stores, Romford-road, Manor Park, for J. Alcoe; conversion of shop, 375-377, High-street North, for J. Steeds; lavatory, 242, High-street North, J. H. Storrar; garage, rear of 146, Hampton-road, H. Rees; lavatory, rear of 36, Plashet-lane, for F. Pratt; dancing hall rear of Wakefield House, for G. J. A. Baker.

FERMOY.—Mr. D. J. Buckley, C.E., architect to the Fermoy Urban Council, is preparing site plans for a housing scheme for the town.

GRANTHAM.—The T.C. has decided to acquire seven acres of land on Dysart-road for housing purposes. Plans approved by T. C.: Four houses in Huntingtower-road for H. H. Bowler; surface water drainage plan at Oil Depot, Dysart-road, for the "Shell" Marketing Co., Ltd; new shop front, High-street, for A. H. Hallett.

GREENWICH.—Drainage plans passed by B.C.: at 295, 297 and 299, Evelyn street, for A. H. Durnford; at North Pole Public House, Greenwich-road, for F. Pinch; at Lion Wharf, Norman-road, for Fry Bros.; at Brewery Wharf, for Percy Antill & Co.; at 81, Little Heath, for Messrs. Tamsett & Co.; at 89 & 91, Church-street, for Coneybeare & Co.; at Day Nursery, Church-street, Deptford, for C. P. Moore.

HALIFAX.—Plans approved: Messrs. Smith, Bulmer & Co., additions and alterations to fire escape, Holmfield Mills; J. H. Dyson & Son, storage shed, Water Side; John Foster & Sons, motor garage, Carlton-place; Rd. Whitaker & Sons, Ltd., shed extension, Corporation-street; Wm. Asquith, Ltd., Shipping Bay, Highroad Well Works; Wm. Asquith, Ltd., pump room, Spring Hall-lane; Harold Fletcher, motor garage, "Selby Lawn"; Fred Hainsworth, verandah, "Westcliffe"; Fortune Bros., Ltd., lavatory accommodation, Shay-lane; Smith, Bulmer & Co., engine house, Bedford-street North; Harry H. Law, altering second floor to bakehouse, 60, New Crown-street; United Brassfounders & Engineers, Ltd., works extension, Spring Hall-lane; Messrs. Riley Bros., shed extension, Kingston Mills; A. Woodruff & Co., electric sub-station, Arden Works; Halifax Industrial Society, Ltd., additional conveniences to bakery, Osborne-street; Mrs. Beatrice Bland, addition, etc., Branta-avenue; Rev. Father Bradley, roof alteration, St. Bernard's R. C. Church; J. & J. Baldwin & Partners, Ltd., additional storing accommodation, Clark Bridge Mills; Smith, Bulmer & Co., offices, Keighley Mills; Barstow & Midgeley, office extension, Harrison-road; Samuel Sutcliffe, wash-house, etc., "Murlymoss"; Fletcher Bros., Ltd., new roof, Raglan-street; Helliwell & Shaw, garage and shop, Burnley-road; J. Sagar & Co., Ltd., plate pattern store over coke oven, Canal Works; John Herbert Riley, detached house, Willow Drive; Frank Slater, Ltd., additional storey, Blackwood Mills; R. Whitaker & Sons, Ltd., alterations to Bridge Tavern, Grove-street, and Northgate; Mixenden Carbonising Co., Ltd., motor garage, Mixenden Mills; Smith, Bulmer & Co., store and garage, Holmefield Mills; Graham & Normanton, pattern store, Exmoor street.

HAMMERSMITH.—Drainage plans passed by B.C.: at Colet-court, Hammersmith-road, for the Economic House Drainage Co.; at 241a, Goldhawk-road, for Mr. G. E. Burgess; at 9, Argyle-place, for Mr. H. W. Howard; at Queen's Wharf, Queen-street, for Humphreys, Ltd.; at Willesden Varnish Works, Hythe-road, for Mr. H. Shaw; at Brunswick Works, King-street, for Mr. W. Lowe; at St. Paul's School, Queen-street, for Mr. G. W. Clarke; at 22, Hunt-street, for Mr. C. J. F. Boulton; at 2, Old Oak-road, for Mr. W. Balaam.

LIVERPOOL.—The tender of Mr. E. Ellis, 574, Prescot-road, Liverpool, has been accepted by the Corporation for the erection of four houses on the Elm House estate. The tender of Mr. J. W. Jones has been accepted for the erection of 100 semi-detached houses on Lisburn Farm estate.—Plans proposed by the Land Steward and Surveyor for the conversion of Querry Park, Colderstones, for a secondary school, has been approved.

MANCHESTER.—Plans passed: shop front, No. 1171, Ashton Old-road, and Sandywell-street, Openshaw; alterations to premises, Nos. 16 and 18, Queen-street; floor in assembly hall, Y.M.C.A., Peter-street; workshop and saw mill, Croft-street and Ashton New-road, Clayton; revised plan of garage, Victoria-street, Openshaw; Chrome liquor shed to works, Crabtree-lane, Clayton; salt warehouse, Great Central Railway Goods Yard, Blind-lane, Ardwick; cold store, etc., to works, Ogden-lane and Varna-street, Openshaw; addition to works, Victor-street, Openshaw; additions to boiler house of works, Oldfield-street, Clayton; alterations to Oleum stores to works, Delaunay's-road, Crumpsall; building for water softening plant to works, Crumpsall Vale, Crumpsall; alterations to the College Hotel, No. 295, Oxford-road, and Brunswick-street, Chorlton-upon-Medlock; works, Wilmslow-road and Rusholme-place, Rusholme; billiard room and garage to house, Barlow Moor-road and Elm-road, Didsbury; alterations to premises, Nos. 94 and 96, Grosvenor-street, Chorlton-upon-Medlock; works, Stockport-road, Ardwick; motor garage, Wilmslow-road and Fairfax-avenue, Didsbury; alterations to premises at rear No. 686, Stockport-road, Rusholme; addition to works, Upper Brook-street and Dover-street, Chorlton-upon-Medlock; store, Stockport-road, Grey-street, and Grove-place, Ardwick; stables and storeroom, Stockport-road, Ardwick; addition to nursing home, Denison-road, Rusholme; addition to works, West Gorton; additions to house, Ford-lane, Didsbury; alterations and additions to house, "The Cedars," Wilmslow-road, Didsbury; garage and store to house, No. 35, Demesne-road, Withington; sewers, etc., Park-drive, Whalley Range; alterations to stable, Boundary-lane and Coupland-street, Chorlton-upon-Medlock; workshop and store, Medlock-street and Clarendon-street, Hulme; alterations to house, No. 14, Lansdowne-road, West Didsbury; extension to club house, Lansdowne-road, West Didsbury; two houses, Willow Way, Didsbury; alterations to "Woodside," Wilmslow-road, Didsbury; store, etc., Carter-street, Chorlton-upon-Medlock; chimney and alterations to works, Cornbrook-road, Hulme; addition to house, No. 116, Warwick-street, and Botham-street, Hulme; dwelling-house, Wood-road and Green Walk, Whalley Range; alterations of premises into showrooms and workrooms, Great Jackson-street and Silver-street, Hulme; additions to furniture depository, Wilmslow-road, Rusholme; two houses, Ford-lane and Victoria-avenue, Didsbury; alterations to premises, Gibson-place, Cheetham; conveniences for crude stores, Crumpsall Vale, Crumpsall; drains of meat paste factory, Derby-street and Sherbourne-street, Cheetham; conversion of house into hall of residence, Crescent-road, Crumpsall; picture theatre, Charles-street and Walker-street, Blackley; staging and roofing intermediates department, Delaunay's-road, Crumpsall; Azo shop, Waterloo-street, Crumpsall; dry house to Crumpsall Mills, Waterloo-street, Crumpsall; research laboratory and school to Park Works, Ten Acres-lane, Newton Heath; alterations to premises, Bengal-street, Jersey-street, and Radium-street, Ancoats; garage to brewery, Rothwell-street, Newton Heath; conveniences to works, Waterloo-street, Crumpsall; addition to brewery, Monsall-road, Newton Heath; petrol store, etc., to motor works, No. 355, Oldham-road; workrooms, Nos. 59 and 61, Red Bank; addition to pump house to works, Waterloo-street, Crumpsall; conveniences at power house to works, Bottomley Side, Blackley; boiling wells shed to works, Bank-street, Clayton; motor house and transformer rooms to mill, Hobson-street, Newton Heath; alterations to "The George Inn," No. 22, Bury Old-road, Crumpsall; alterations to premises, No. 107, Great Ancoats-street; addition to works, Cheetwood-road, Cheetwood; drug store, Bromley-street and Bilberry-street, Dantzic-street; garage to works, Clapham-street, Moston; addition to bakehouse of premises No. 150, Rochdale-road, Harpurhey; garage in rear of Prospect Villas, Church-lane and King-street, Moston; addition to dye works, Bottomley Side, Crumpsall; alterations to shops and houses, Nos. 38-44, Great Ducie-street, and Back Ducie-street, Cheetham; addition to mill, Factory-lane, Harpurhey; motor garage, Grey Mare-lane, Openshaw; alteration to premises, Nos. 25 and 27, Piccadilly; alterations and additions to warehouse, Albert-street, Greek-street, and Garden-lane; extension of hoist gear room, Spring-alley, Watling-street; alterations to premises, Portland-street; office to works, No. 104, Sackville-street; store, etc., to works, Louisa-street and Sexa-street, Openshaw; additions to forge, Bennett-street, Ardwick; addition to works, Hardman-street, Joddrell street, and Tivoli-street; new front to works, Port-street; colour mixing shed to works, Crabtree-lane, Clayton; shops and workrooms, Copperas-street, Oak-street; alterations to premises, The Piccadilly, Ltd., No. 135, Market-street, and New High-street; Royal Exchange extension, Cross-street; store to works, Limebank-street, Ardwick; new entrance to Boy's Club, Ashbury Works, Ashton Old-road, Openshaw; alterations to shops and houses, Nos. 38-44, Great Ducie-street, and Back Ducie-street, Cheetham; addition to mill, Factory-lane, Harpurhey.

PRESTON.—Plans approved by T.C.:—Alterations to St. Mary's-street Wesleyan School, for Mr. F. Howarth; cottage, East Cliff-road, for Messrs. E. J. Andrew; sewer, Frenchwood Estate, for Messrs. Wilson & Peat. Plans for a shop and lecture hall, Aqueduct-street, for Mr. H. Heaton, are before the Council.

SALFORD.—Application is to be made to the Ministry of Health by the T.C. for sanction to borrow £12,000 for the improvement of the sewage works. Plans have been passed for the construction of sawmill and stores, Back Hulme-street; works, Windsor-bridge, West George-street and Tontine-street, Salford; additional bedroom to house, 24, Park-road, Pendleton; power house, James-street, Pendleton; hoist and covered yard, Orchard-street, Pendleton; motor garage, Chaney-street and Raven-street, Pendleton; billiard hall, Ellor-street and Alma-street; dancing academy, 513, Eccles New-road; offices and stores, Frederick-road, Pendleton; sanitary improvements, "King's Arms," North Broughton-street; motor garage, Sherbourne-street, Salford; garage, Johnson-street, Salford; dwelling-house, Waterpark-road, Broughton; sanitary accommodation, works, Knoll-street, Broughton; motor garage, Waterpark-road, Broughton; lavatory accommodation, Club House, Lancaster-road, Pendleton; offices, Orchard-street, Pendleton; picture theatre, Gerald-road and Cromwell-road; extension of works, Cobden-street, Pendleton; "The Netherlands," Upper Park-road and Waterpark-road, Broughton; premises, Meadow-road, Broughton; works, St. Simon-street, Salford; works, Orchard-street, Pendleton; additions to works, Ordsall-lane, Salford; warehouses, Adelphi-street and Peru-street, Salford; dwelling-house, "Doreen," Old Hall-road, Broughton; reconstruction of floor, Woodside Brewery, Alderley-street; walls of dancing academy, Devonshire-street and Maleham-street, Broughton; warehouses, Canute-street, Pendleton; re-roofing of boiler house, Springfield-lane, Salford; drainage of nine dwelling houses, Vernon-road and Cavendish-road, Broughton; eight dwelling-houses, Cavendish-road, Broughton; Victoria Mills, St. Luke's-road, Pendleton; alterations to Press Gallery, Manchester Racecourse, Cromwell-road, Pendleton.

SEDGFIELD.—The Sanitary Surveyor (Mr. J. Stones) has submitted to the R.D.C. eight sets of plans of various types of houses for consideration. In these plans Mr. Stones shows the height of the rooms to be 8 ft. 6 in. The houses are all of the parlour type with bathrooms, which are chiefly downstairs to meet the requirements of miners. The lay-out shows eight, ten, and eleven houses to the acre. The Council's scheme provides at present for about 500 houses, including 120 at Ferryhill, 116 Trimdon, 102 Cornforth, 45 Chilton, 20 Bishop Middleham, 10 Fishburn, 35 Sedgefield, six Bishopton, six Morden and Stainton.

SOUTH SHIELDS.—Plans approved: Mr. J. H. Morton, for Mr. J. Keith, alterations at 84, Back Cuthbert-street; Mr. J. H. Morton, for Councillor G. E. Evans, garage, Back Challoner Terrace East; Mr. F. W. Newby, for the Irish National Workmen's Club and Institute, Ltd., alterations to premises, Keppel-street; Mr. Jas. Tullis, for Messrs. Jamieson & Foster, heating trench between garage and showroom, Back Albert-terrace, and joiner's shop, over shoeing forge, Coronation-street; Messrs William & T. R. Milburn, for Mr. Hugh Robson, bakery, Bath-street; Mr. A. Reaveley, for the Harton Coal Co., Ltd., dwelling-house, Harton-lane; Mr. T. A. Page & Sons, for the Rev. J. P. Bryne, conversion of villa into school, Wyvestow, Westoe; Messrs. T. A. Page & Sons, for the Bank of Liverpool, Ltd., alterations at Bank of Liverpool, Laygate, corner of Green-street; Mr Howard Hill, for Mr. Joseph Calvino, washhouse, 124, Ocean-road; Mr. Howard Hill, for Mr. Frank Lake, roofing in of Yard No. 4, Victoria-terrace.

WHITEHAVEN.—The M.H. has approved the tender of Messrs. Leslie & Sons for the construction of roads and sewers and erection of houses for the T.C.

FIRES.

DUBLIN.—Damage amounting to several thousand pounds has been caused by a fire at the office of the *Irish Times*.

PATENTS.

APPLICATIONS PUBLISHED.*

131,945.—H. C. Ritchie and M. Kahn: Reinforced-concrete construction of ships, floating docks, pontoons.

131,947.—H. C. Ritchie and M. Kahn: Reinforced-concrete construction of ships, floating docks, pontoons.

131,991.—W. H. Shaw: Pivoted windows.

119,231.—H. E. Martinet: Construction of reinforced-concrete floors.

132,039.—J. S. E. De Vesian and L. G. Mouchel and Partners: Reinforced-concrete structures.

132,119.—W. McBride: Sash fasteners.

132,134.—G. Voisin: Structures adapted to be quickly erected or taken down.

132,219.—J. S. E. De Vesian and L. G. Mouchel and Partners: Reinforced-concrete structures.

* All these applications are now in the stage in which opposition to the grant of Patents upon them may be made.

COMPETITIONS, CONTRACTS, &c.

For some contracts still open, but not included in this List, see previous issues. Those with an asterisk (*) are advertised in this number. Contracts iv; Competitions iv; Public Appointments lvi; Sales by Auction lx. Certain conditions beyond those given in the following information are imposed in some cases, such as that advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

BUILDING AND PAINTING.

OCTOBER 10.—**Chelmsford.**—HOUSES.—The Council invite tenders for the erection of 12 houses on part of the Boarded Barns Estate, Chelmsford. Quantities of the Borough Engineer (Mr. Pecival T. Harrison, A.M. Inst.C.E.), Municipal Offices, Chelmsford. Deposit, £1 1s.

OCTOBER 10.—**Harrow-on-the-Hill.**—The Harrow-on-the-Hill Urban District Council invite tenders for the erection of twenty cottages of four different types in Bessborough-road, Harrow.

OCTOBER 11.—**Stafford.**—HOUSES.—The Corporation invite tenders for the construction of twenty-one houses, to be erected on the Cotton Field Estate, Stafford. Quantities of Mr W. Plant, Borough Engineer, Borough Hall, Stafford. Deposit, £1 1s.

*OCTOBER 13.—**Hammersmith.**—The Metropolitan Borough of Hammersmith invite tenders for the construction of roads and sewers on the first section of the Council's new housing estate.

*OCTOBER 13.—**Hammersmith.**—The Metropolitan Borough of Hammersmith invite tenders for the erection of about 60 cottages on plot 1 of their new housing estate.

OCTOBER 14.—**Chelmsford.**—REPAIRS, &C.—The Guardians of the Chelmsford Union invite tenders for certain repairs, painting, &c., at the Girls' Home, Beehive-lane, Chelmsford. Specification of Mr. Arthur S. Duffield, Clerk, 96, High-street, Chelmsford.

OCTOBER 14. — **Croydon.** — SMITH'S SHOP.—The T.C. invite tenders for the erection of smith's shop at the Tramway Depot. Quantities at the Borough Engineer's Office, Town Hall, Croydon. Deposit, £1 1s.

OCTOBER 14. — **Ellesmere Port.** — HOUSES. — The Urban District Council invite tenders for the erection of 65 houses at Ellesmere Port. Quantities of the Architects, Messrs. Lockwood & Abercrombie, Cathedral Chambers, St. Werburgh-street, Chester. Deposit £1 1s.

OCTOBER 14.—**Farnham.**—The Farnham U.D.C. invite tenders for (1) Thirty-four houses by four separate tenders in three groups of eight houses and one of ten houses; (2) Roads, sewers, footpaths, surface water drains, &c.; (3) Fences; (4) Planting hedges, trees, shrubs, &c., preparing for sowing verges and an open space.

OCTOBER 14.—**Rothwell.**—CINEMA.—The Rothwell Public Service, Ltd., invite tenders for the erection of a cinema hall in Ingram-parade, Rothwell. Quantities of the Architect, Mr. E. Schofield, Leventhorpe House, Woodlesford, near Leeds. Deposit £1.

OCTOBER 14.—**Shoreham-by-Sea.**—PAINTING.—The Guardians of Steyning Union invite tenders for carrying out painting, &c., work, at their Workhouse, Shoreham-by-Sea. Specification of Mr. Arthur Flowers, Clerk, Union Offices, Shoreham-by-Sea.

OCTOBER 14.—**Worthing.**—HOSPITAL.—The Corporation invite tenders for the following works, at the Borough Isolation Hospital, Durrington, near Worthing:—(1) The erection of a tuberculosis hospital, near Broadway, and fences; (2) Alterations and additions to the administrative block. Quantities of the Borough Surveyor, Municipal Offices, Worthing. Deposit £2 2s.

OCTOBER 15.—**Chepstow.**—The Chepstow R.D.C. invite tenders for the erection of the first twenty houses of the Roggiett Scheme, near Severn Tunnel Junction Station.

OCTOBER 15.—**Leeds.**—PAINTING.—Tenders are invited by the Property Committee for painting at various public baths in the city. Specifications of Mr. W. T. Lancashire, City Engineer, Municipal Buildings, Leeds.

OCTOBER 15.—**Leeds.**—PAINTING.—The Sewerage Committee invite tenders for cleaning and painting the steel bridge over the River Aire at Rodley Sewage Works. Specification of Mr. Geo. A. Hart, Sewerage Engineer, Pearl Chambers, East Parade, Leeds.

OCTOBER 15.—**Melton Mowbray.**—PAINTING.—The Guardians of Melton Mowbray Union invite tenders for the carrying out at the Union Workhouse and Children's Home, Melton Mowbray, of painting and decorating work, &c. Specification of Mr. Arthur H. Marsh, Clerk, Melton Mowbray.

OCTOBER 16.—**Biggleswade.**—The Biggleswade Rural District Council invite tenders for the erection of 179 houses in the following adjoining parishes: Langford, 42 houses; Clifton, 32; Arlesey, 44; Stotfold, 61.

OCTOBER 16.—**Newcastle-on-Tyne.**—PAINTING.—The Baths and Washhouses Committee invite tenders for exterior and interior painting and cleaning to the Gallowgate Baths, Elswick Baths, Westgate Baths and Byker Baths. Quantities at the City Estate and Property Office, Town Hall, Newcastle-on-Tyne.

OCTOBER 17.—**Highworth.**—The Highworth Rural District Council invite tenders for the erection of 20 houses at Chisledon.

OCTOBER 18.—**Chester.**—CHIMNEY.—Tenders are invited for the erection of a chimney 14 ft. high, and economiser chamber at Upton Asylum, Chester. Specifications of the County Architect, Mr. H. Beswick, F.R.I.B.A., Newgate-street, Chester. Deposit £2.

OCTOBER 20.—**Heath Hill (Salop).**—The Commissioners of H.M.O.W. invite tenders for the erection of cottages, &c., at Heath Hill, Salop.

OCTOBER 20.—**Hendon.**—The Hendon Urban District Council. Builders and others desirous of tendering for the erection of two hundred and forty-four artisans' dwellings at Hendon may obtain full particulars of the architect, Mr. George Hornblower, F.R.I.B.A., 3, Devonshire-terrace, Portland-place, London, W. 1.

OCTOBER 20.—**Richmond (Surrey).**—The Commissioners of His Majesty's Works, Storey's Gate, Westminster, S.W. 1, are prepared to receive tenders for the extension of Richmond (Surrey) Post Office; also for the extension of Weybridge Post Office. (Separate tenders for each.)

OCTOBER 20.—**Sherborne (Dorset).**—The Sherborne. U.D.C. invite tenders for the erection of 36 cottages, formally approved on the Yeovil-road site, Sherborne.

OCTOBER 20.—**Warrington.**—HOSPITAL ADDITIONS.—The Health Committee of the Borough invite tenders for the erection of hospital wards at the Sanatorium, Hefferston Grange, near Weaverham, Cheshire. Quantities of the Borough Surveyor, Town Hall, Warrington. Deposit, £1 1s.

OCTOBER 20.—**Weymouth.**—POST OFFICE EXTENSION.—H.M. Office of Works invites tenders for the extension of the Post Office. Quantities from the Director of Contracts, H.M. Office of Works, Storey's-gate, Westminster, S.W. Deposit, £1 1s.

*OCTOBER 23.—**Bootle.**—The Corporation of Bootle invite tenders for the erection of 8 houses in blocks of 4 (Contract No. 3), 12 houses in blocks of 4 (Contract No. 2), 10 houses in pairs (Contract No. 5), 4 houses in pairs (Contract No. 6).

OCTOBER 27.—**Hayes (Middlesex).**—HOUSES.—The Hayes U.D.C. invite tenders for the erection of 148 houses on the Glebe Field, Botwell.

*OCTOBER 28.—**Golders Green, N.W.**—The Commissioners of His Majesty's Works, Storey's Gate, Westminster, London, S.W. 1, for the erection of a new sorting office at Golders Green.

OCTOBER 29.—**Shoreditch, E.**—PAINTING AND REPAIRS.—The Guardians of the Poor of the Parish of St. Leonard, Shoreditch, invite tenders for internal painting and repairs to the East Block at the Infirmary, Hoxton-street, N. 1.

*OCTOBER 30.—**Cemeteries in France and Belgium.**—The Imperial War Graves Commission are prepared to receive tenders for a total supply of 8,900 headstones, packed, delivered free on rail, to be divided into a number of contracts, none of which shall be for less than 100 headstones.

OCTOBER 31. — **Hertford.** — The Hertfordshire County Council are prepared to receive tenders for the taking down of three large hospital ward huts, one recreation hut, covered ways, boiler house, boilers and heating apparatus.

OCTOBER 31 — **Nottingham.** — HOUSING. — The Housing Committee invite plans and estimates for the erection and completion of dwelling-houses for the working classes. In such cases the Committee would consider the acquisition of the houses when and if completed to their satisfaction, if erected upon land belonging to the Corporation, and the purchase of the site and houses if the land belongs to private owners, provided the scheme received the approval of the Ministry of Health. Particulars of Mr. W. J. Board, Town Clerk, Guildhall, Nottingham.

NOVEMBER 1.—**Ripley.**—The Ripley Urban District Council invite tenders for the erection of 66 houses on their Greenwich House Estate site, Ripley. Contractors may tender for 22, 44, or the whole of the houses.

*NOVEMBER 6.—**Wallasey.**—The Council invite tenders for the erection of thirty-three houses in Aldersley-road and Poulton-road, in two sections of 22 houses and 11 houses respectively. Contractors may tender for either one or two sections.

NO DATE.—**Hertford.**—The Hertford R.D.C. invite tenders for the erection of three pairs of cottages at Datchworth.

NO DATE.—**Rawcliffe and Ryther.**—COTTAGES.—The West Riding County Council invite tenders for the erection of two pairs of cottages and outbuildings in Mill-lane, Rawcliffe, and 10 pairs of cottages and a garage on the road from Rawcliffe to Rawcliffe Bridge, and also 3 pairs of cottages at Ryther, near Selby. Quantities of Mr. Francis Alvey Darwin, Clerk to the County Council, County Hall, Wakefield.

FURNITURE, MATERIALS, etc.

OCTOBER 10. — **Salford.** — SCHOOL DESKS. — The Education Committee invite tenders for school desks. Particulars of the Secretary, Education Offices, Salford.

ENGINEERING, IRON AND STEEL.

OCTOBER 13.—**Edinburgh.**—ELECTRICAL INSTALLATIONS.—The Corporation invite tenders for the electric lighting installations of dwelling houses under the new housing scheme, Gorgie, Edinburgh. Specification at the Engineer's, Office Dewar-place, Edinburgh. Deposit £1 1s.

OCTOBER 14.—**London.**—RAILWAY MATERIALS.—The Great Indian Peninsula Railway Company invite tenders for the supply of the following stores, namely, cast iron tank plates, &c.; cast iron water pipes, &c.; and fencing materials. Specifications of Mr. R. H. Walpole, Secretary, 48, Copthall-avenue, London, E.C. Fee, 10s. each specification.

OCTOBER 20.—**Barnsley.**—HEATING INSTALLATION.—Tenders are invited for the installation of a new centralised heating and hot-water supply apparatus, at the Poor-Law Institution, Gawber-road, Barnsley. Specification of Mr. C. J. Tyas, Clerk, Union Offices, Pitt Street, Barnsley. Deposit £2 2s.

OCTOBER 20.—**Bristol.**—LIFTS AND HOISTS.—The Docks Committee invite tenders for the construction of six electrically driven lifts and two electrically driven mutton hoists at the New Cold Stores, Royal Edward Dock, Avonmouth. Drawings of Mr. Thomas A. Peace, Engineer, Engineer's Office, Avonmouth Dock. Deposit £5.

OCTOBER 20.—**Grimsby.**—The County Borough of Grimsby Electricity Department. The Corporation invite tenders for the sinking of new well.

OCTOBER 20.—**Lincoln.**—FOUNDATIONS.—The City Council invite tenders for driving reinforced concrete piles and the construction of concrete foundation raft, water conduit, &c., for the extension to their St. Swithin's Power Station. Quantities of Mr. Stanley Clegg, City Electrical Engineer, Electricity Department, Brayford Side North, Lincoln. Deposit, £1 1s.

NOVEMBER 3.—**Basingstoke.**—WATERWORKS PLANT.—The Corporation invite tenders for the supply and erection of pumping machinery at their waterworks, comprising suction gas plant, gas engine and pumps (all in duplicate), capable of pumping 30,000 gallons per hour from a well in the high level reservoir. Specification of Mr. F. R. Phipps, Borough Engineer, Town Hall, Basingstoke. Deposit £3 3s.

NOVEMBER 10.—**Woolwich.**—PUMPS.—The Metropolitan Water Board invite tenders for the supply and erection of three centrifugal pumps at their Pumping Station at Shooter's-hill, Woolwich. Specification at the Offices of the Board, Chief Engineer's Department, South-place, Finsbury-pavement, E.C. 2. Deposit £1 1s.

NO DATE.—**Maple Brook.**—WATERWORKS PLANT.—The South Staffordshire Waterworks Co. invite tenders for supplying and erecting a vertical triple expansion pumping engine with force pumps and borehole pumps, at the Maple Brook Pumping Station, near Lichfield. The plant to be capable of pumping 2,000,000 gallons per 24 hours, against a total head of 512 feet, including friction. Specification of Mr. Fred. J. Dixon, engineer, 26A, Paradise-street, Birmingham.

ROAD, SANITARY, AND WATER WORKS.

OCTOBER 11. — **Sutton and Tooting.** — The Metropolitan Asylums Board invite tenders for (1) Sanitary alterations at The Downs Sanatorium, Sutton, Surrey; (2) roof and other general repairs at The Downs Sanatorium, Sutton Surrey; (3) general building repairs at Grove Hospital, Tooting-grove, Tooting Graveny, S.W. 17.

OCTOBER 13.—**Chelmsford.**—The Town Council of Chelmsford invite tenders for the laying of sewers and the construction of street works on the Boarded Barns Housing site.

OCTOBER 14.—**Lewisham.**—WOOD PAVING.—The Council invite tenders for wood paving works along the breasts of the carriageway in Eltham-road, Lee, from Lee Green to Leyland-road, an area of about 1,850 super years. Specification, &c., at the Town Hall, Catford (Surveyor's Dept.).

OCTOBER 15.—**Llantrisant.**—SEWERAGE WORKS.—The Llantrisant and Llantwit R.D.C. invite tenders for the Pontyclun sewerage scheme, consisting of the laying of sewers, construction of a ferro-concrete bridge over the River Ely, construction of ferro-concrete tanks, erection of pumping station, &c. Quantities of Messrs. Thomas & Morgan & Partners, Pontypridd. Deposit, £5.

OCTOBER 15.—**Llantrisant.**—ROAD.—The Llantrisant and Llantwit Fardre R.D.C. invite tenders for the construction of a new road about ½ mile in length between Ystradbarwig and Tynant, in the parish of Llantwit Fardre. Quantities of Mr. Thomas Saunders, Surveyor, School-street, Pontyclun. Deposit, £2.

OCTOBER 15.—**Prestwich.**—DRAINAGE, &C.—The U.D.C. invite tenders for the construction of certain drains for foul and surface water and excavation for a roadway on the Bent-hill Estate, Prestwich. Quantities of Mr. S. H. Morgan, A.M.Inst.C.E., Bent-hill, Prestwich. Deposit £2 2s.

OCTOBER 21.—**Stowmarket.**—WATER SUPPLY.—The East Stow R.D.C. invite tenders for the construction of water works. Quantities of Messrs. John Taylor & Sons, Civil Engineers, 36, Victoria-street, Westminster, S.W. 1.

OCTOBER 22.—**Hawarden.**—SEWERAGE.—The R.D.C. invite tenders for supplying and laying about 559 lineal yards of 12 in. diameter cast-iron pipes, 798 yards of 10 in. diameter, ditto, and 567 yards of 6 in. diameter. Also 164 lineal yards of 12 in. diameter stoneware pipe-sewer, &c. Quantities of the Joint Engineers, Messrs. Elliott & Brown, A.M.I.C.E., Buildings, Nottingham; or Mr. A. Caradoc Williams, A.M.I.C.E., 6, Godstall Chambers, Chester. Deposit £3 3s.

NOVEMBER 1.—**Kirkby-in-Ashfield.**—WATERWORKS.—The U.D.C. invite tenders for supplying and laying of about 2,850 yards of 9 in. cast-iron pipes, &c., as duplicate pumping main. Deposit of the engineers, Messrs. Elliott and Brown, A.M.I.C.E., Burton Buildings, Parliament-street, Nottingham. Deposit, £2 2s.

Auction Sales, Tenders, &c.

OCTOBER 10.—**London.**—Messrs. Daniel Watney & Sons will sell at Winchester House, Old Broad-street, E.C., freehold property known as Commercial Schools, Nos. 563 & 565, Wandsworth-road, Clapham.

✱OCTOBER 14.—**Berkshire.**—Messrs. Henry Butcher & Co., will sell at High Street, Bracknell, Berks, the whole of the valuable stock of builders and general ironmongery together with useful rolling stock.

OCTOBER 14.—**London, N.E.**—Mr. William F. Laing will sell at 1 & 2, Tottenham-square, Tottenham-road, Kingsland-road, N.E., various galvanized goods, belling, tarpaulins, 2-ton motor van, roofing felt and numerous other useful goods.

OCTOBER 14. — **Ponders End, London, N.**—Messrs. Weatherall & Green will sell at the National Projectile Factory, building materials.

✱OCTOBER 16.—**Stroud, Gloucester.**—Messrs. Bruton, Knowles & Co. will sell by direction of the Disposal Board, surplus building materials at Lighterton Aerodrome.

✱OCTOBER 17.—**Watford.**—Mr. C. H. Halsey will sell at Rickmansworth-road Saw Mills wood-working machinery, 6 electric motors, 40 h.p. gas engine and suction plant, carpenter's benches, timber and builder's plant.

OCTOBER 21 AND 22.—**Grays, Essex.**—Mr. Edward R. Porter will sell the whole of the large and well-assorted stock-in-trade and machinery of a builder and contractor.

✱OCTOBER 21.—**Hendon.**—Messrs. Henry Butcher & Co. have received instructions from Messrs. The Graham White Co. to sell the extensive surplus building plant, material and stock, comprising nearly 1,000,000 bricks, including wire cut stocks, &c.

OCTOBER 21 and 22.—**Lyndhurst (Hants).**—Messrs. Joseph Hibbard & Sons will sell by auction at the Depot adjoining Lyndhurst road Station (L. & S.W. Rly.). Stock of English soft and hardwoods.

OCTOBER 23.—**London.**—Messrs. Daniel Watney & Sons will sell about 11¼ acres of freehold land known as "Gilbert's Estate," adjoining the Harringay Park Green-lane Station, and close to Finsbury Park.

✱OCTOBER 29 AND TWO FOLLOWING DAYS.—**Hendon, N.**—Messrs. Henry Butcher & Co. have received instructions from Messrs. The Grahame-White Company to sell at the London Aerodrome, Hendon, N.W. 9, the valuable surplus plant and materials, comprising 750,000 wire cut, stock and other bricks, &c.

✱OCTOBER 29.—**London, E.C.**—Messrs. Holcombe & Betts will sell at Winchester House, Old Broad-street, E.C., the well-equipped brickworks known as Town Mill Brickfield, Bracknell, Berks.

Competitions.

(See Competition News, page 364.)

Public Appointments.

OCTOBER 10.—**Anglesey County Council, Llangefni.**—Applications for appointment of qualified temporary assistant to small holding architect.

OCTOBER 10.—**Harpenden.**—The Council require temporary services of competent architect for erection of 64 houses.

OCTOBER 15.—**Richmond.**—The Town Council invite applications for the appointment of a qualified architectural assistant. Salary £175 per annum, with War Bonus at the present rate of £65 per annum.

OCTOBER 15.—**Salisbury.**—Salisbury Town Council propose to appoint four professional quantity surveyors in connection with their scheme for the erection of 500 houses.

✱OCTOBER 20.—**Hertford.**—The Hertford Borough Corporation require the temporary services of a competent architectural assistant in the Borough Surveyor's office. Salary £5 per week. Applications, stating age, experience, &c., to Mr. Arthur F. Holden, Borough Engineer and Surveyor, The Castle, Hertford.

✱OCTOBER 21.—**Willesden.**—The Willesden U.D.C. are prepared to receive applications for building inspector and also inspector for duties under the Petroleum Acts and Factory and Workshops Acts. Salary £200 per annum, with an additional £50 per annum for duties under the Petroleum Act, &c. Applications, stating qualifications, &c., to Mr. Ben Haylor, Acting Engineer of the Council, Municipal Offices, Dyne-road, Kilburn, N.W. 6.

✱NO DATE.—**Winchester.**—Required in County Survey Department, temporary architectural assistant. Salary £250 per annum.

Nottingham Housing Competition.

The second premiated design in the above competition was by Mr. F. J. North, and not "Horth," as stated in our recent article.

The current issue of *Asbestos*, a monthly journal published by Messrs. Turner Bros. Asbestos Co., Ltd., Rochdale, contains an excellent reproduction of the roll of honour of the firm's employees who fell in the war, the original of which is at present at the War Memorials Exhibition. The issue contains many well-written articles, mostly devoted to industrial questions.

NEW COMPANIES.

THE particulars quoted below have been compiled by Messrs. Jordan & Sons, Ltd., Company Registration Agents, 116 and 117, Chancery Lane, W.C.2, from the documents available at the Companies Registry :—

KEENAN, PARKER & YATES, LTD. (156,979). Registered July 12, 1919. Builders and contractors. Nominal capital, £2,000.

BEAUMONT'S BUILDING MATERIALS, LTD. (157,004). Registered July 14, 1919. 7, Carill-drive, Fallowfield, Manchester.

DARLASTON BRICK CO., LTD. (157,009). Registered July 14, 1919. Martin Winn & Co.'s Works, James Bridge, Darlaston. Brick manufacturers, &c.

RATCLIFFE & SMITHSON, LTD. (157,022). Registered July 14, 1919. Low-lane, Woodside, Horsforth, near Leeds. Builders, contractors, joiners, &c. Nominal capital, £5,000.

W. J. B. HALLS, LTD. (157,030). Registered July 14, 1919. Barton Gates, Gloucester. Builders, contractors, engineers, decorators and builders merchants, &c. Nominal capital, £10,000.

WALKER-WESTON CO., LTD. (157,031). Registered July 14, 1919. 75, Coleman-street, E.C. Consulting and constructional engineers, builders and contractors. Nominal capital, £12,000.

ANGLO-BALTIC TIMBER MANUFACTURING AND EXPORT CO., LTD. (157,034). Registered July 15. 10-12 Walbrook, E.C.4. Nominal capital, £25,000.

FORSTER GLASS CO., LTD. (157,045). Registered July 15, 1919. Atlas Glass Works, St. Helens, Lancs.

L. ROBSON, LTD. (157,055). Registerd, July 15, 1919. 2a, Ward-street, West Hartlepool. Plumbers, gasfitters, sanitary engineers, &c.

HILCO, LTD. (157,081). Registered July 16, 1919. 50, Twyford-street, Caledonian-road, N. Timber and general merchants. Nominal capital, £2,000.

MILLER & SELMES, LTD. (157,093). Registered July 16, 1919. 75a, Sideswell-road, Eastbourne. Builders. Nominal capital, £4 000.

ASTLEY BUILDING CO., LTD. (157,109). Registered. Hill-street, Dukinfield, Chester. Joiners, builders, contractors, &c. Nominal capital, £2,000.

B.C.L. SYNDICATE, LTD. (157,220). Registered July 21, 1919. 54, Gresham-street, E.C.2. Brick and tile manufacturers. Nominal capital, £6,000.

OSBORNE & CO. (CONTRACTORS), LTD. (157,118). Registered July 16, 1919. 2, Grafton-street, W. Furniture and decorative contractors, builders, contractors, &c. Nominal capital, £10,000.

AUSTRALIA CONCRETE BLOCK MACHINE SYNDICATE, LTD. (157,126). Registered July 17, 1919. 168, Salisbury House, E.C.2. Nominal capital, £2,000.

CALLOW & WRIGHT, LTD. (157,223). Registered July 21, 1919. 207, Brondesbury Park, Willesden Green, N.W. Contractors, builders, decorators and electrical engineers. Nominal capital, £11,000.

BARTON & CO. (WALTON), LTD. (157,263). Registered July 22, Timber merchants, sawyers and saw mill proprietors. Nominal capital, £10,000.

RAYLEIGH BRICK & TILE CO., LTD. (157,243). Registered July 21. Rayleigh, Essex.

BRICKS (WILMSLOW), LTD. (157,168). Registered July 18, 1919. The Brick Works, Morley, Wilmslow. Nominal capital, £3,000

WOODS BROS., LTD. (157,253). Registered July 21. Audley Range Brickworks, Blackburn. Brick manufacturers. Nominal capital, £30,000.

BLACKBURN ASPHALTING CO., LTD. (157,111). Registered July 16. Pleasington-street, Witton, Blackburn. Builders and contractors. Nominal capital, £2,000 in £1 shares.

CORNISH ROADSTONE & GRANITE CO., LTD. (157,892). 132, Union-street, Torquay. Nominal capital, £5,000.

DERBY HOUSING CO., LTD. (157,256). Registered July 21, 1919. Smiths Bank Chambers, Market-place, Debry. To establish and form garden suburbs in or near Derby. Nominal capital, £100.

CRAVEN LIME CO., LTD. (157,269). Registered July 22, 1919. Langcliffe, Settle, Yorkshire. Nominal capital, £42,000.

ROWSE & JONES, LTD. (16,412,412). 1, Dawson-street, Liverpool. Registered June 25, 1919. To carry on the business of structural engineers and contractors, &c. Nominal capital, £2,000.

BRODOG TIMBER & SAW MILLS CO., LTD. (157,298). Brodog, Fishguard, Pembroke. Registered July 23, 1919. Nominal capital, £8,000.

BIRCH SAW MILLS, LTD. (157,368). Registered July 25, 1919. 370, Euston-road, N.W.1. Nominal capital, £35,000.

LONDON WOODS WORK, CO. LTD. (157,427). Registered July 26, 1919. 4, Ferdinand-place, Chalk Farm, N.W. Timber merchants, &c. Nominal capital, £500.

LANCASHIRE BUILDERS' WAGES.

The Court of Arbitration, in London, on Monday gave a decision affecting operative builders employed in the calico trades. The case was heard between the Calico Printers' Association and Messrs. F. Steiner & Co., Ltd., near Accrington, and the National Federation of Building Trades' Operatives. The question submitted was to determine whether there is a prescribed or substituted rate of wages applicable to joiners, masons, painters and slaters employed by the Calico Printers' Association and Messrs. F. Steiner & Co., and if so what is such prescribed or substituted rate of wages. The men concerned are joiners, masons, painters and slaters employed by the Association and the firm referred to, and are engaged largely on maintenance work. The establishments in which the men are employed are situated in the Blackburn district, and the claim is that the prescribed rate applicable to these men is the prescribed rate applicable to the same grades of workpeople employed in the building trade in the district in question, and that consequently any rate substituted for that prescribed rate in the building trade should be applicable to the men concerned as from the date when it was so substituted. On November 11, 1918, joiners, masons, painters and slaters employed in the building trade in the district received a rate of 1s. 5d. per hour. On that date the men concerned received 1s. 4d. per hour.

An agreement was arrived at by the North Western Area Joint Council for the Building Trade on February 19, 1919, under which hourly rates were fixed for all building trade operatives in that area. This agreement received the approval of the Minister of Labour. The employers who are parties to this reference were not parties to the agreement of February 19, 1919. Under the agreement, a rate of 1s. 7d. per hour was fixed for joiners, masons, painters and slaters employed in the building trade in the Blackburn district. After the agreement of February 19, 1919, had been made, a claim for 1s.7d. per hour was submitted by the men concerned in this application to their employers. The employers refused to accede to the claim, but offered to advance the rate to 1s. 6d. per hour. This offer was refused. The parties have recently agreed, pending the decision of this Court and without prejudice, that the men concerned shall receive as from March 1, 1919, a rate of 1s. 6d. per hour.

The Court decided that the prescribed rate applicable to the men concerned is 1s. 4d. per hour, and that inasmuch as the rate of 1s. 6d. an hour which has been paid since March 1, 1919, is not paid in pursuance of an agreement approved by the Minister of Labour, no rate has been substituted for the prescribed rate in the sense of the Wages (Temporary Regulation) Acts, 1918 and 1919.

PRICES CURRENT OF MATERIALS.*

[Owing to the exceptional circumstances which prevail at the present time, prices of materials should be confirmed by inquiry. Since our last issue several prices have been revised.—Ed.]

BRICKS, &c.

Per 1,000 Alongside, in River Thames up to London Bridge. £ s. d.

Best Stocks 3 16 6

Per 1000, Delivered at London Goods Stations.

	£ s. d.		£ s. d.
Flettons	2 15 6	Best Blue Pressed Staffordshire ...	9 3 6
Best Stourbridge Fire bricks	10 10 0	Do. Bullnose ..	9 8 6
		Blue Wire Cuts	7 13 6
GLAZED BRICKS—			
Best White, Ivory, and Salt Glazed Stretchers ..	21 10 0	D'ble Str'tch'rs	28 10 0
		D'ble Headers	25 10 0
		One Side and two Ends ..	29 10 0
Headers.....	21 0 0	Two Sides and one End	30 10 0
Quoins, Bullnose and 4½in. Splays and Flats	26 10 0	Squints.....	28 0 0

Second Quality, £1 per 1,000 less than best. Cream and buff, £2 extra over white. Other colours, Hard Glaze, £5 10s. extra over white.

	s. d.	
Thames Ballast	15 6	per yard, delivered
Pit Sand	18 6	
Thames Sand	20 0	2 miles radius
Best Washed Sand	19 0	
½in. Shingle for Ferro-Concrete	18 0	Paddington.
¼ in. ,, ,,	19 0	

Per ton, delivered in London area.

	£ s. d.		£ s. d.
Best Portland Cement	3 13 6	..	3 16 6

66/6 alongside at Vauxhall in 80-ton lots.

Ferrocrete per ton extra on above. 5 0

Best Ground Blue Lias Lime 2 10 0 at riy. depot.

NOTE.—The cement or lime is exclusive of the ordinary charge for sacks. The sacks are charged at 2s. 6d. each and credited at 2s. each if returned in good condition within three months.

Grey Stone Lime ..... 55s. 0d. per ton delivered.

Stourbridge Fireclay in s'cks 42s. 6d. per ton at riy. dpt.

STONE.

	s. d.
BATH STONE—delivered in railway trucks at Westbourne Park, Paddington, G.W.R., or South Lambeth, G.W.R.. per ft. cube.....	2 0
Do. do. delivered in railway trucks at Nine Elms, L. & S.W.R.. per ft. cube	2 1½
Do. do. delivered on road waggons at Nine Elms Depot	2 2½
PORTLAND STONE— Brown Whitbed, in random blocks of 20 ft. average, delivered in railway trucks at Nine Elms, L.& S.W.R., South Lambeth Station, G.W.R., and, Mileage Station G.W.R., per ft. cube	3 6½
Do. do. delivered on road waggons at above stations, per ft. cube..	3 7½
White basebed, 3d. per ft. cube extra.	
NOTE.—½d. ft. cube extra for every foot over 20 ft. average.	

RANDOM BLOCKS—Per Ft. Cube, delivered at Rly. Dpot.

	s. d.		s. d.
Ancaster in blocks	3 2	Closeburn Red	
Beer in blocks ...	1 11	Freestone	3 4
Grinshill in blocks	2 9	Red & White Mansfield random block	5 2
Darley Dale in blocks	3 2	Yellow Magnesian Limestone do. do	4 2

YORK STONE, BLUE—*Robin Hood Quality.*

	s. d.
Delivered at any Goods Station London.	
Scappled random blocks .....Per Ft. Cube	7 0
6 in. sawn two sides landings to sizes (under 30 ft. super.) .....Per Ft. Super	5 6
6 in. rubbed two sides, ditto ..... ,,	6 2
3 in. sawn two sides slabs (random sizes) ,,	2 5
2 in. to 2½ in. sawn one side slabs (random sizes) ..... ,,	1 5½
1½ in. to 2 in. ditto, ditto ..... ,,	1 3

HARD YORK—

Delivered at any Goods Station London.	
Scappled random blocks .....Per Ft. Cube	6 0
6 in. sawn two sides landing to sizes (under 40 ft. super.) .....Per Ft. Super	5 0
6 in. rubbed two sides ditto ..... ,,	6 0
4 in. sawn two sides slabs (random sizes) ,,	2 10½
3 in. ditto, ditto ,,	2 2
2 in. self-faced random flags ..Per Yard Super	6 10

WOOD.

(The following prices are the Controller's prices fixed Feb. 7, 1919. The control is now removed.)

Pursuant to paragraph 3 of the Timber Control Order, 1918, the Controller of Timber Supplies hereby gives notice that until further notice the following shall be the maximum prices at which imported timber may be sold. These prices are per standard landed and in store.

WHITE SEA REDWOOD.

Inches	1st £ s.	2nd £ s.	3rd and unsorted £ s.	4th £ s.
4 × 11	54 10	52 10	49 10	47 10
4 × 9	50 10	48 10	45 10	43 10
4 × 8	47 10	45 10	42 10	40 10
4 × 7	47 10	45 10	42 10	40 10
3 × 8	46 10	44 10	41 10	39 10
3 × 7	46 0	44 0	41 0	39 0
3 × 6	45 10	43 10	40 10	38 10
3 × 5	45 10	43 10	39 10	37 10
2½ to 3 × 11....	53 10	51 10	48 10	46 10
2½ to 3 × 9....	48 0	46 0	43 0	41 0
2½ × 7 to 8.....	46 0	44 0	41 0	39 0
2½ × 6	45 10	43 10	40 10	38 10
2½ × 5	45 10	43 10	39 10	37 10
2 × 11	53 10	51 10	48 10	46 10
2 × 9	48 0	46 0	43 0	41 0
2 × 8	46 10	44 10	41 10	39 10
2 × 7	46 0	44 0	41 0	39 0
2 × 6	45 10	43 10	40 10	38 10
2 × 5	44 10	42 10	39 10	37 10
2 × 4	44 10	42 10	40 0	38 0

UNSORTED LARCHWOOD at 6rd Archangel Redwood Prices.

Boards, 1st and 2nd, £1 10s. extra.
Boards, 3rd and 4th, £1 extra.

WOOD (*Continued*).

FEATHER EDGED BOARDS, £40 10s. per std.

SAWN LATHS, 3s. per bundle.

U/S SLATING BATTENS (yellow and white and strips), £35.

SWEDISH AND NORWEGIAN FLOORING AND MATCHING.

U/S Red and White.

Per 100ft. super.	Per 100 ft. super
1¼in. P.E. at 60/-	¾in. P.E. at 30/-
1½in. P.E. at 50/-	¼in. P.E. at 25/6
1in. P.E. at 40/-	⅛in. P.E. at 20/6
⅞in. P.E. at 35/-	

T. & G. and Match Lining at 6d. per square extra.

PLANED BOARDS—11 in., £45 per standard; 10 in., £43 per standard; 9 in., £43 per standard; 8 in., £41 per standard.

YELLOW PINE.

Inches	1st £ s.	2nd £ s.	3rd £ s.	4th £ s.
3 × 12 and up ..	67 0	55 0	50 10	44 0
3 × 11.....	64 0	53 0	48 10	44 0
3 × 10.....	58 0	48 0	44 0	42 0
3 × 9.....	57 0	47 0	43 0	41 0
3 × 8.....	55 0	45 0	42 0	39 0
3 × 7.....	55 0	45 0	42 0	39 0
3 × 6 and down	52 0	42 0	40 0	37 0

For complete specification and controlled prices, see "London Gazette," February 7, 1919.

Dry Wainscot Oak, per ft. super, as inch	0 2 6	to	0 3 0		
¼ in. do. do.	0 2 0	to	0 2 6		
Dry Mahogany—Honduras, Tabasco, African, per ft. super, as inch	0 2 6	to	0 3 0		
Cuba. Mahogany	0 3 6	to	0 4 0		
Teak (Rangoon, Moulmein or Java), per load.. ..	60 0 0	to	85 0 0		
American Whitewood planks, per ft. cube ..	0 18 0	to	1 0 0		
Scotch Glue, per cwt.	5 5 0	..	—		
Liquid Glue, per gallon ..	0 17 0	..	—		

SLATES.

1st quality slates from Bangor or Portmadoc in truck load delivered London area. Per 1,000 of 1,200.

		£ s. d.
Best Blue Bangor Slates,	24 by 12	48 10 0
,, ,, ,,	22 by 12	35 0 0
First quality ,,	22 by 11	32 5 0
,, ,,	20 by 12	32 0 0
Best Blue Portmadoc	20 by 10	27 10 0
,, ,,	18 by 10	22 0 0
First quality ,,	18 by 9	18 0 0
,, ,,	16 by 10	17 0 0
,, ,,	16 by 8	13 5 0

TILES.

	Per 1,000 f.o.r. London. £ s. d.
Best machine-made tiles from Broseley or Staffordshire district.....	6 2 6
Ditto hand-made ditto.....	6 7 6
Ornamental ditto	6 10 0
Hip and valley tiles (per dozen)	0 14 0

METALS.

WROUGHT-IRON TUBES AND FITTINGS—

(Discount off List for lot of not less than £10 net value delivered direct from works. 5 per cent. less carriage forward if sent from London stocks.)

	Sizes up to and including 2 in. Tubes.	Fittings.	Sizes 2½ in. to 6 in. Tubes.	Fittings.
Gas	26½	32½	31½	37½
Water	18½	28½	26½	35
Steam	11½	25	21½	32½
Galvanised Gas ..	7½	25	12½	30
,, Water	+ 2½	—21½ ..	—50	—27½
,, Steam	+ 12½	—17½	+ 2½	—25

L.C.C. COATED SOIL PIPES—London Prices ex works.

	Pipe. s. d.	Bends, stock angles. s. d.	Branches, stock angles s. d.
2 in. per yd. in 6 fts..	4 7	3 4	4 0
2½ in. ,, ,,	5 6	3 8	5 0
3 in. ,, ,,	6 9	4 0	6 0
3½ in. ,, ,,	7 6	5 0	7 0
4 in. ,, ,,	7 11	5 8	8 0

RAIN-WATER PIPES, &c.

	Pipe. s. d.	Bends, stock angles. s. d.	Branches, stock angles s. d.
2 in. per yd. in 6fts. plain	3 4	1 10	2 6
2½ in. ,, ,,	3 9	2 2	3 0
3 in. ,, ,,	4 6½	2 8	4 0
3½ in. ,, ,,	5 4	3 2	4 8
4 in. ,, ,,	5 7½	3 10	5 8

L.C.C. DRAIN PIPES,—9 ft. lengths. London Prices. 4 in., 10s. .. 5 in., 12s 6d. .. 6 in., 15s.

METALS (*Continued*).

	Per ton in London. £ s. d.		£ s. d.
Sheet Iron, Galvanised, flat, best quality—			
Ordinary sizes to 20 g. ..	35 10 0	..	Nominal prices.
,, 22 g. and 24 g.	36 0 0	..	
Ordinary sizes to 26 g. ..	39 0 0	..	
Galvanised Corrugated Sheets—			
Ordinary sizes, 6 ft. to 8 ft. 20 g.....	33 0 0	..	Nominal prices only.
Ordinary sizes, 22 g. and 24 g.....	33 10 0	..	
Ordinary sizes. 26 g.	32 10 0	..	
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker.....	28 0 0	..	—
Best Soft Steel Sheets, 20 g. and 24 g.....	28 10 0	..	—
Best Soft Steel Sheets, 26 g.	30 0 0	..	—
Cut Nails, 3 in. to 6 in.	31 0 0	..	32 0 0

(Under 3 in. usual trade extras.)

LEAD, &c.

	Delivered in London. £ s. d.		£ s. d.
LEAD* Sheet, English, 4 lb. and up	37 0 0	..	—
Pipe in coils	37 10 0	..	—
Soil Pipe	40 0 0	..	—
Compo pipe	42 10 0	..	—

NOTE—Country delivery, 20s. per ton extra; lots under 5 cwt., 1s. 6d. per cwt. extra. Cut to sizes, 2s. cwt. extra.

Old lead, ex London area, at Mills ..... per ton	23 10 0	..	—
Do., ex country, carriage forward..... per ton	24 10 0	..	—
COPPER—			
Strong Sheet ....per lb.	0 2 3	..	—
Thin ,, ... ,,	0 2 4	..	—
Copper nails .... ,,	0 2 3	..	—
Copper wire .... ,,	0 2 4	..	—
TIN—English Ingots ,,	0 2 10	..	—
SOLDER—Plumbers' ,,	0 1 3	..	—
Tinmen's..... ,,	0 1 5	..	—
Blowpipe ..... ,,	0 1 8	..	—

GLASS.

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES AND IN SQUARES IN ORDINARY SIZES.

	Per Ft.		Per Ft.
15 oz. fourths	7½d.	32 oz. fourths	10½d.
,, thirds	8d.	,, thirds	11½d.
21 ,, fourths	8½d.	Fluted, Obscured and Enamelled Sheet,	
,, thirds	8½d.	15 oz.	7½d.
26 ,, fourths	9½d.	21 ,,	8½d.
,, thirds	10½d.		

Extra price according to size and substance for squares cut from stock.

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.

	Per Ft.
¼ Rolled plate	4½d.
⅜ Rough rolled and rough cast plate.....	5½d.
½ Rough rolled and rough cast plate.....	5½d.
Figured Rolled, Oxford Rolled, Baltic, Oceanic, Arctic, Stippolyte, and small and large Flemish white	6½d.
Ditto, tinted	8½d.
Rolled Sheet	6d.
White Rolled Cathedral	6d.
Tinted do.	8d.

PAINTS, &c.

		£ s. d.
Raw Linseed Oil	in pipes..... per gallon	0 7 11
,, ,, ,,	in barrels .... ,,	0 8 2
,, ,, ,,	in drums .... ,,	0 8 4
Boiled ,, ,,	in barrels .... ,,	0 8 8
,, ,, ,,	in drums .... ,,	0 8 10
Turpentine	in barrels ..... ,,	0 10 6
,,	in drums (10 gall.) .. ,,	0 11 0
Genuine Ground English White Lead, per ton (In not less than 5 cwt. casks.)		75 0 0
GENUINE WHITE LEAD PAINT— "Nine Elms," "Park," "Supremus," and other best brands (in 14 lb. tins) not less than 5 cwt. lots.. per ton delivered		95 10 0
Red Lead, Dry (packages extra) ..	per ton	46 10 0
Best Linseed Oil Putty	per cwt.	1 11 3
Filocol.....	per cwt.	0 16 6
Size. X D Quality.....	fkn.	0 6 0

VARNISHES, &c.

		Per gallon. £ s. d.
Oak Varnish.....	Outside	0 17 0
Fine ditto	ditto	0 19 0
Fine Copal	ditto	0 20 6
Pale Copal	ditto	0 21 6
Pale Copal Carriage	ditto	0 23 6
Best ditto	ditto	0 33 6
Floor Varnish.....	Inside	0 18 0
Fine Pale Paper	ditto	0 17 0
Fine Copal Cabinet	ditto	0 21 6
Fine Copal flatting	ditto	0 19 6
Hard drying Oak	ditto	0 17 0
Fine Hard drying Oak	ditto	0 18 0
Fine Copal Varnish	ditto	0 19 6
Pale ditto	ditto	0 21 6
Best ditto	ditto	0 33 6
Best Japan Gold Size.....		0 19 0
Best Black Japan		0 22 0
Oak and Mahogany Stain		0 21 0
Brunswick Black		0 14 0
Berlin Black.....		0 19 0
Knotting		0 31 0
French and Brush Polish		0 22 0
Liquid Dryers in Terebine		0 17 0

* The information given on this page has been specially compiled for THE BUILDER and is copyright. Our aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the highest or lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information.

TENDERS.

Communications for insertion under this heading should be addressed to "The Editor," and must reach him *not later than* 12 *noon on Wednesday*.

* Denotes *accepted* † Denotes *provisionally accepted*

‡ Denotes *recommended for acceptance.*

§ Denotes *accepted subject to modifications.*

LEEDS.—For erection of 86 houses, on Hawkswood Wood Housing Estate, for the Corporation (amended tender) :—

*W. Thompson & Son—	
Eleven houses, contract No. 3,233 ..	£7,645
Thirty-two houses, contract No. 3,234	26,240
Thirty-two houses, contract No. 3,236	27,040
*Wood Brothers—	
Eleven houses, contract No. 3,235 ..	7,701

LEEDS.—For the erection of 47 houses on the Hawkswood Wood Housing Estate, for the Corporation (amended tender) :—

*W. Thompson & Sons, six houses	£4,184 17 6
*William Airey & Son, ten houses.....	7,633 0 0
*William Airey & Son, fifteen houses ..	11,375 19 3
*William Airey & Son, eight houses ...	7,192 0 0
*William Airey & Son, eight houses ..	7,192 0 0

LIVERPOOL.—For exterior and interior painting at St. George's Hall, for the Corporation :—

*Frank Hay, Ltd., Liverpool £1,149

LIVERPOOL.—For finishing roads at Fazakerley Sanatorium in tar macadam, for the Corporation :—

*W. Hall & Son, Ltd., Liverpool £1,360

LONDON.—For maintenance of carriage and footways of London and Blackfriars Bridges, for the City Corporation :—

*J. Mowlem & Co.—London Bridge	£985
*G. J. Anderson—Blackfriars Bridge	1,062

LONDON.—For external painting, pointing and repairs to the whole of the Kingsland-road House and Infirmary Buildings, Nurses' Home, Mortuary, &c., in the Kingsland-road, E., and Hoxton-street, N., and the Casual Wards in Reeves-place, N., for the Guardians. Mr. F. Danby Smith, A.R.I.B.A., architect, Parliament Mansions, Victoria-street, S.W. 1.

*J. Oliver, Hoxton	£8,577 18 0
Edwards Construction Co., Blackheath.....	8,753 0 0
Price & Alabaster, Fenchurch-street	8,906 0 0
H. Kent, Hither-green	8,942 0 0
H. H. Smith, Finsbury-market ..	9,879 0 6
Stapleton & Sons, Stoke Newington	9,906 0 0
R. W. Marrable, Leytonstone....	10,969 0 0
A. H. Inns, Bishopsgate	11,992 0 0
Rice & Sons, Stockwell	13,795 12 6

LYDNEY (GLOS.)—For the erection of 50 dwellings on the Tutnalls Site, Tutnalls-street, Lydney, for the Rural District Council. Messrs. Kennard & Kennard, architects and surveyors, 12, Grays Inn-square, W.C. 1 :—

	Houses.	*Sewage, &c.*
Watkins Williams	£36,000 0	£2,900 0 0
J. W. B. Halls	34,226 0	2,506 0 0
W. F. Drew	34,000 0	1,900 0 0
Williams T. Nicholls, Ltd.	33,669 0	3,247 0 0
Chepstow Co-part. Constn. Co.	32,500 0	2,167 0 0
Garden Cities Housing Co.....	31,366 15	2,573 7 7
*The Bldg. & Public Wks. Construction Co., Ltd.	28,664 0	1,639 12 0

MAIDSTONE.—For the erection of (*a*) 14 houses in Tonbridge-road, and (*b*) 12 houses in Upper Fant-road :—

	a.	*b.*
Martin Douglas, Hammersmith	£15,410	£13,596
Corben & Son	14,960	13,189
Barney & Son	14,657	12,776
W. T. Burrows	14,568	12,706
Moss (Southend)	13,095	11,481
Wallis & Son	12,992	11,328
Barden & Head	12,116	11,020
N. Smith	11,926	10,948
M. Newman	11,917	11,812
*Clarke & Epps	11,836	10,798

NORTHAMPTON.—For heating installations in various schools, for the Corporation :—

*S. Booth Horrocks (Kettering-road School)	£1,655
*Seaton & Peat (Military-road School)..	£1,580
*Buckley's, Ltd., London (Far Cotton School)	£1,302
*S. Booth Horrocks (Vernon-terrace School)	£1,205
*Seaton & Peat (Stimpson-avenue School)	£1,584
*Young, Austin & Young (Campbell-square School)	£1,710
*S. Booth Horrocks (Wellington-place School)	£319

WANDSWORTH.—For painting works at the Intermediate Schools, for the Guardians of the Wandsworth Union :—

*J. S. Fenn, Woolwich	£393 0
F. C. Flack, Southfields	530 0
F. & G. Foster & Co., Norwood Junction	549 0
F. G. Cressy, Chiswick.....	613 0
A. G. Winters, South Norwood ..	685 10
S. T. Wright, Brixton	700 10

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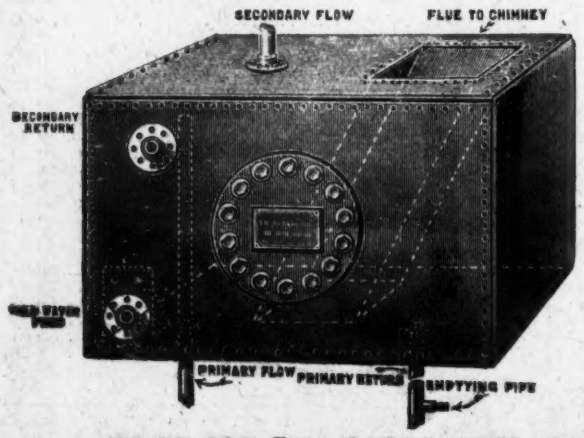

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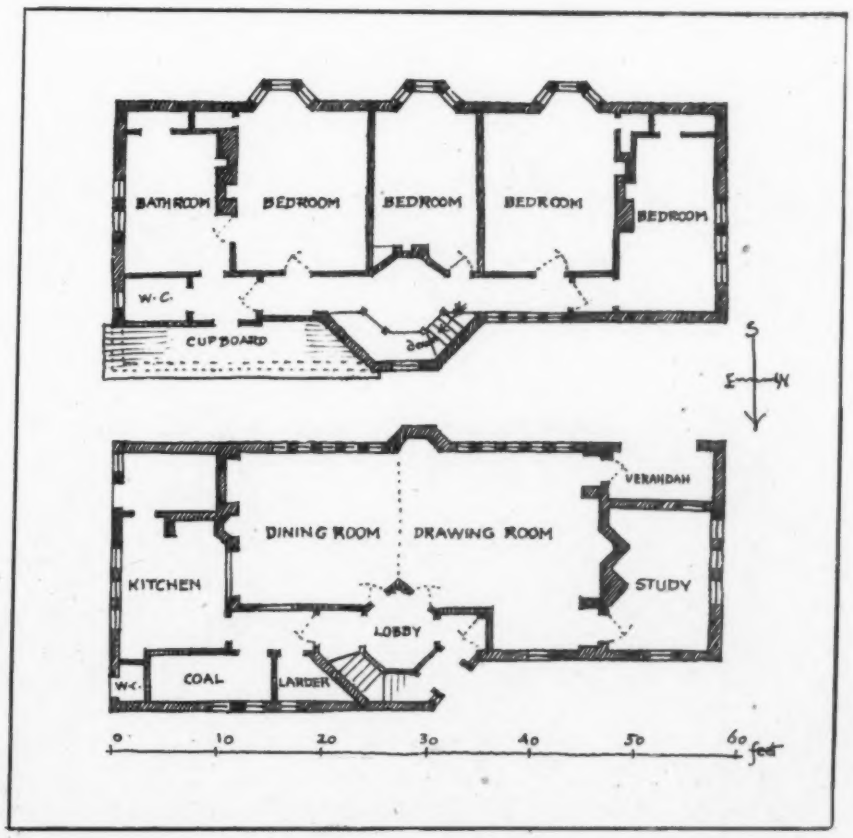
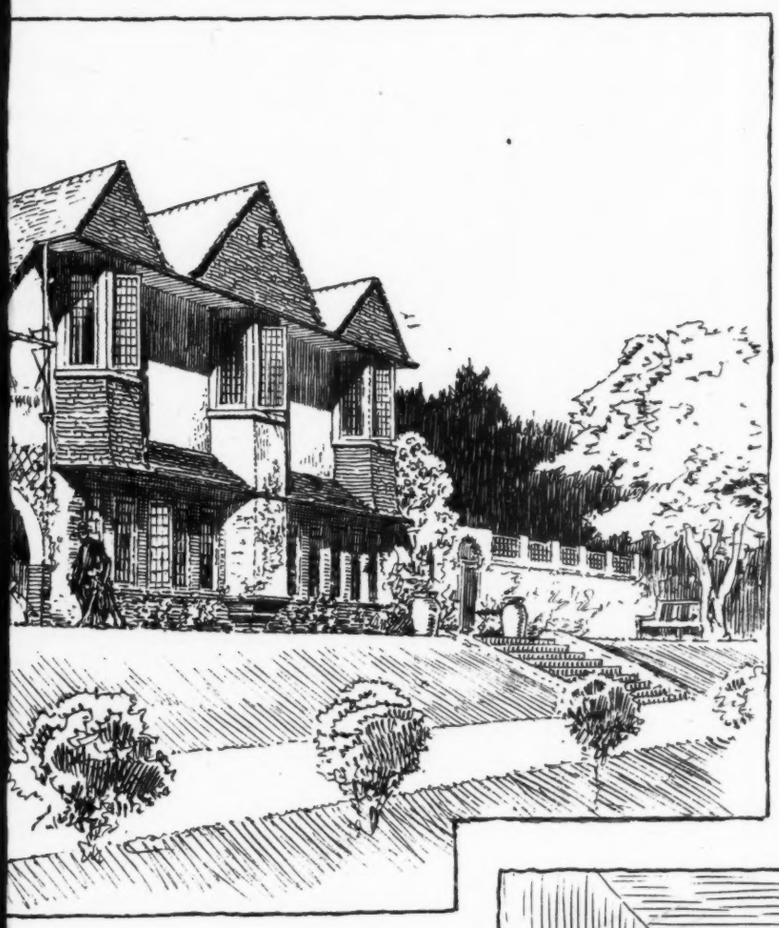
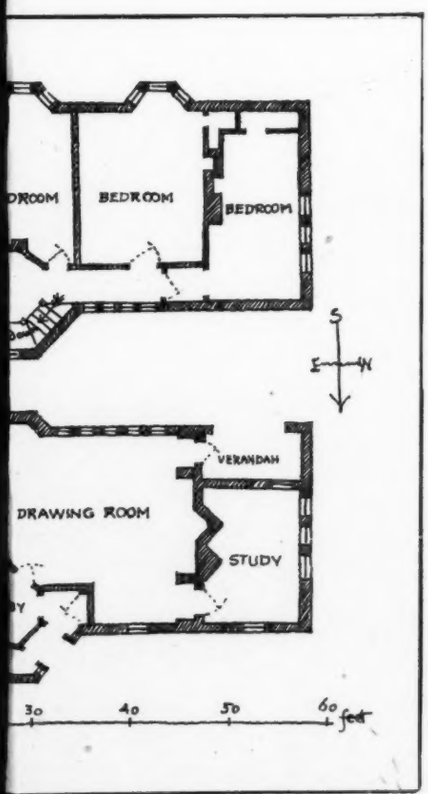
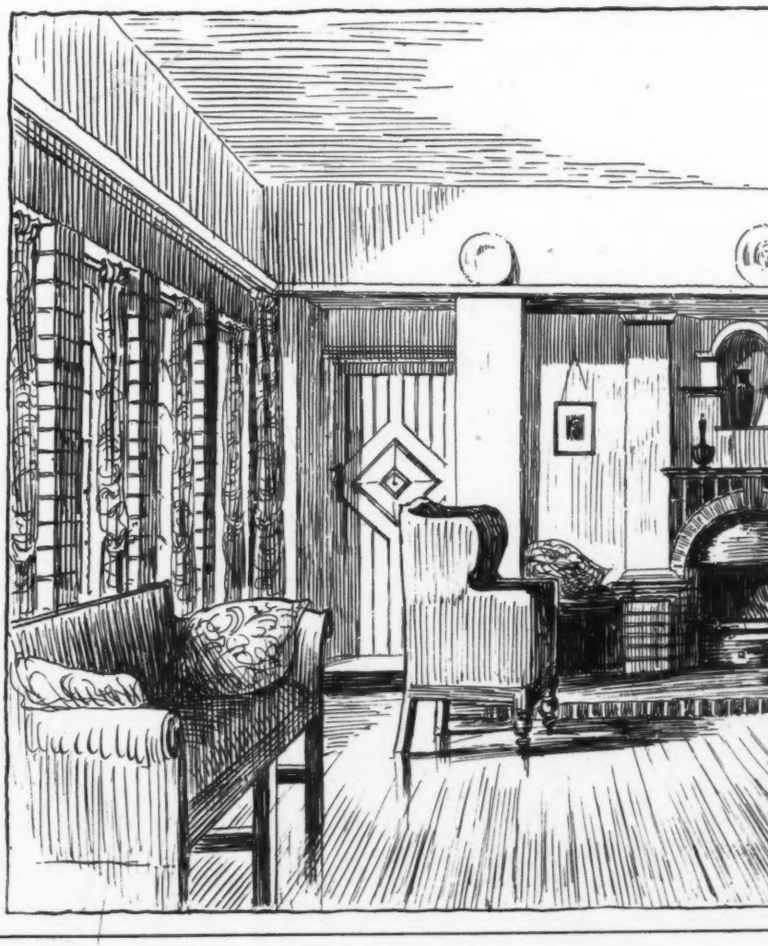


"FURTHERSIDE," WOLDINGHAM.—MR. MAURICE E. WEBB, F.R



ENTRANCE FRONT





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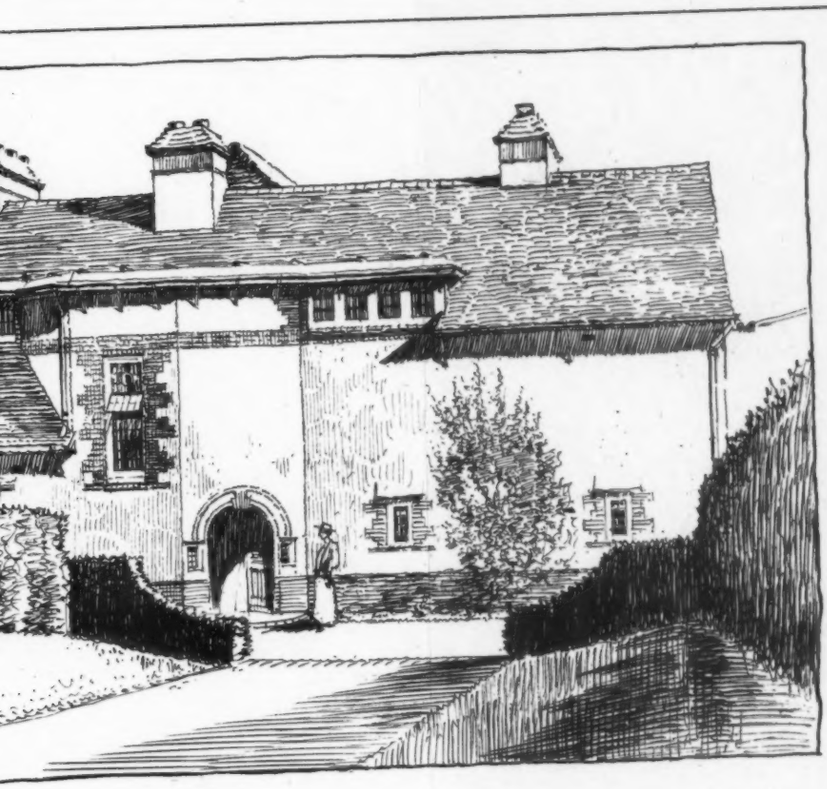
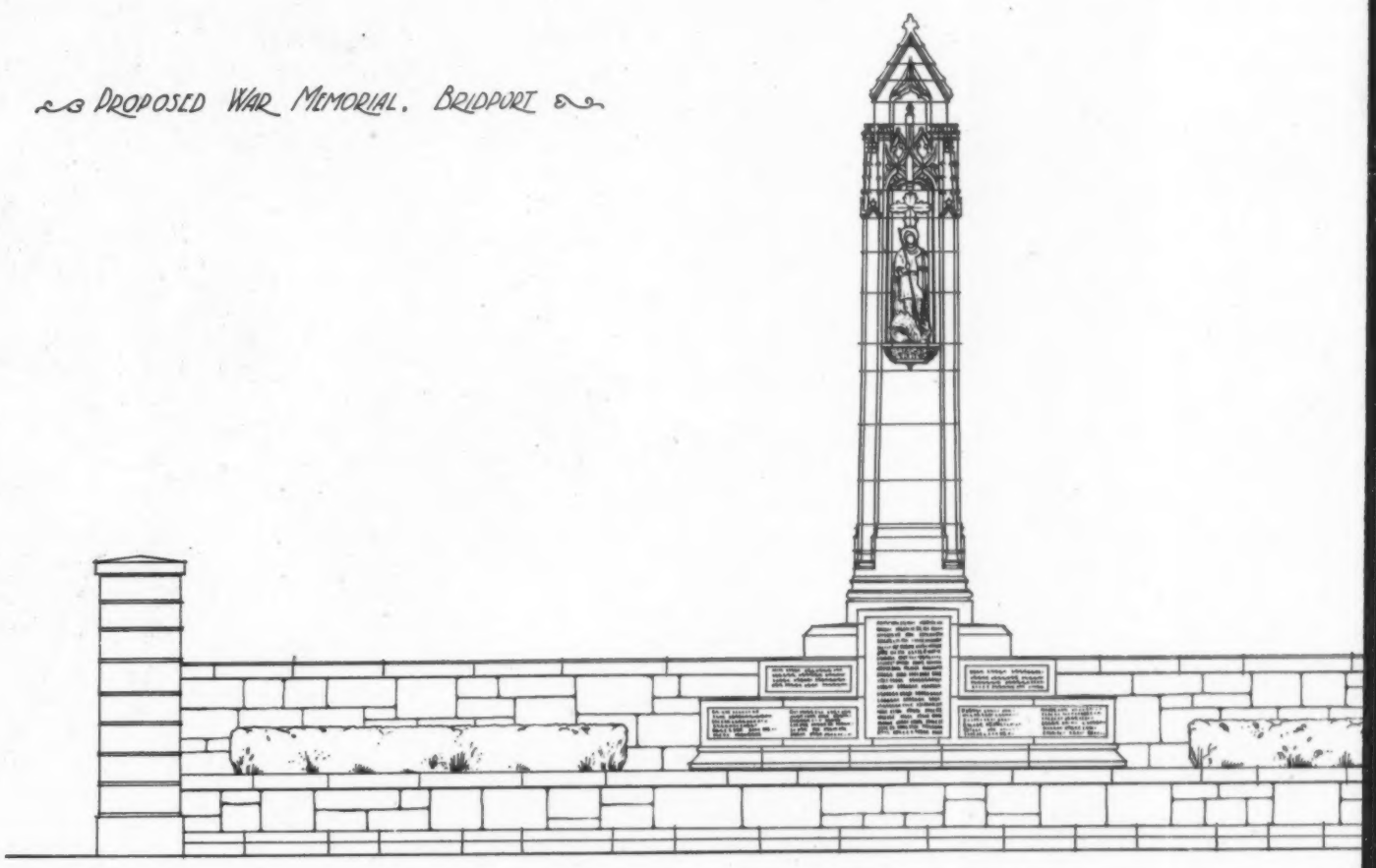
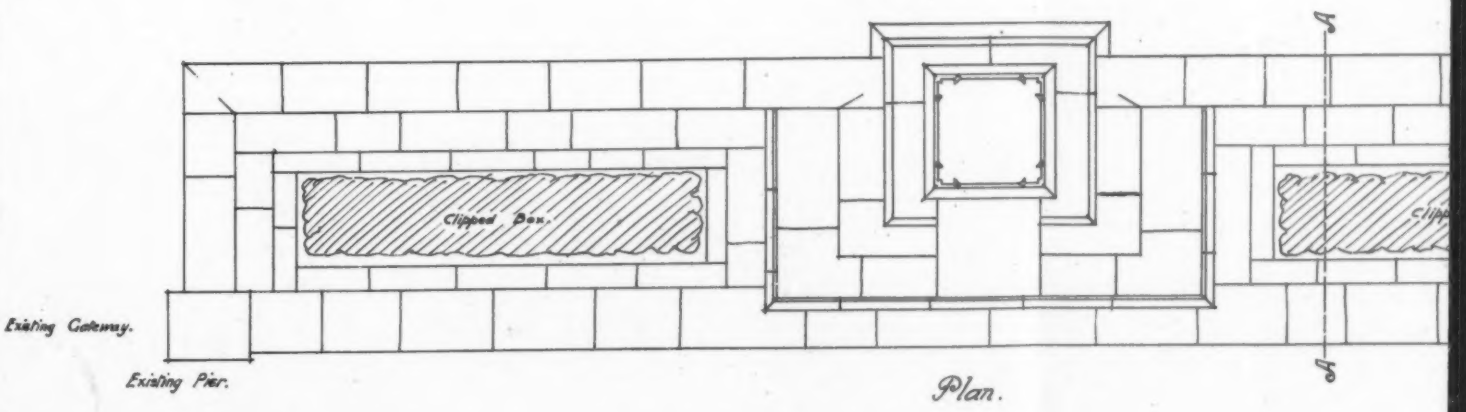


WEST END OF LONG ROOM

Proposed War Memorial. Bridport

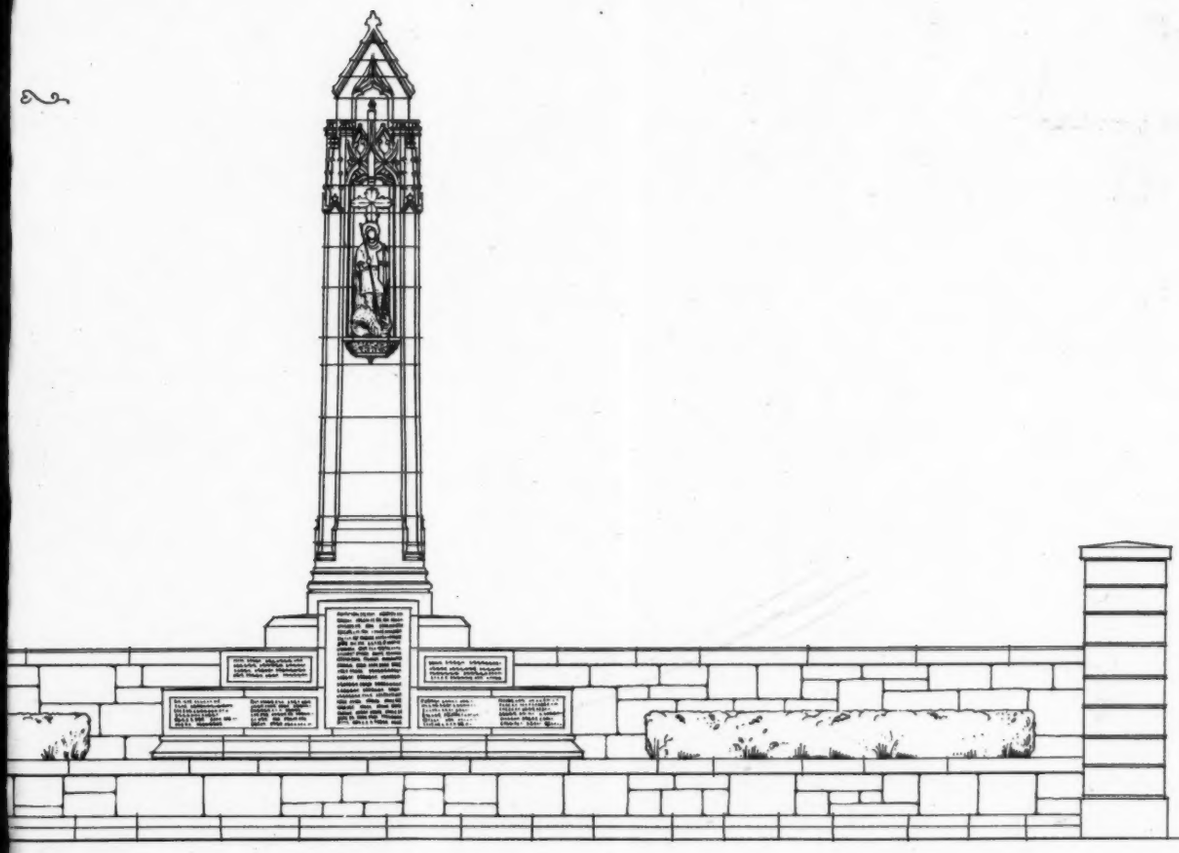


Elevation to Road.

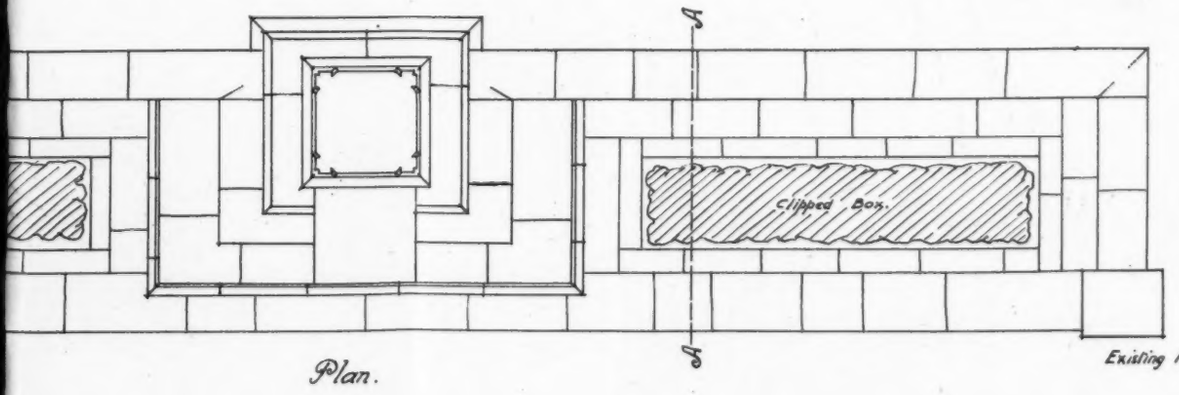


Plan.

Mr. G. Gilbert Scott. A.R.A.. Architect

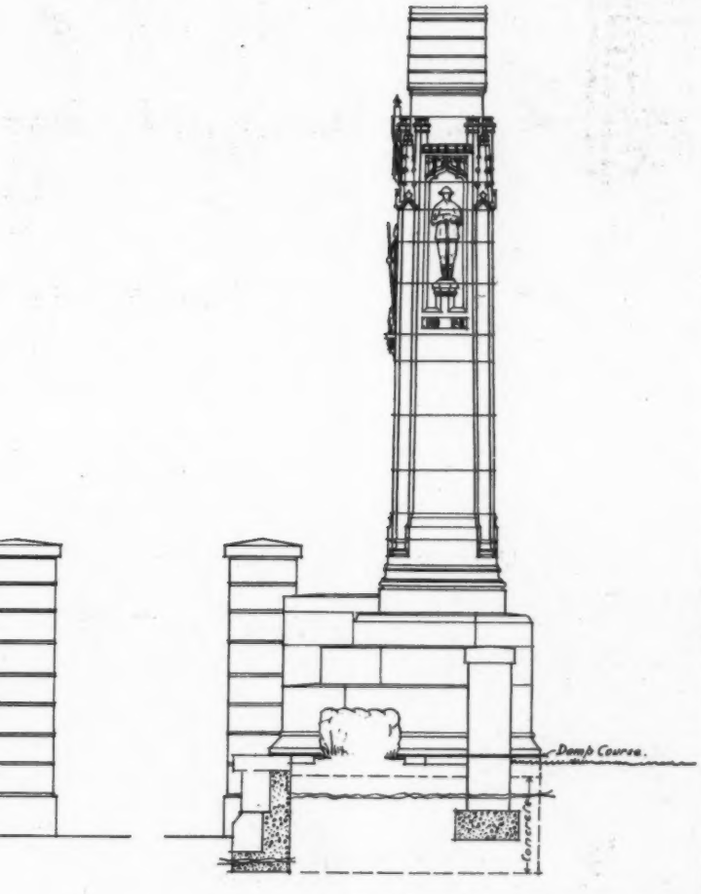


Elevation to Road.



Plan.

MR. G. GILBERT SCOTT. A.R.A., ARCHITECT.



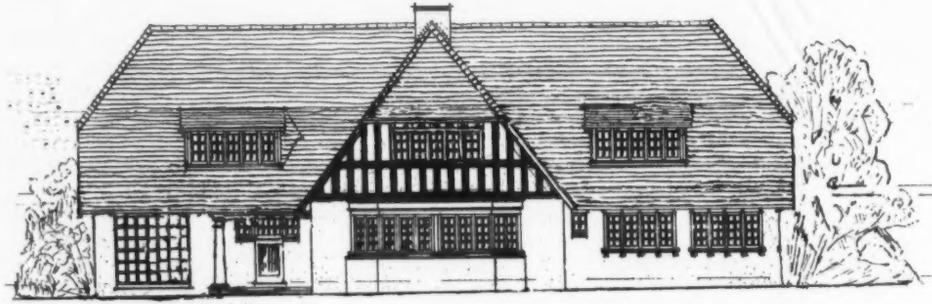
Section AA.

Existing Pier.

G. GILBERT SCOTT, A.R.A. ARCHT.,
7 GRAY'S INN SQUARE,
LONDON, W.C.

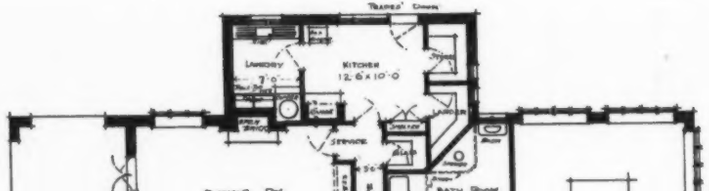
PROPOSED COLONIAL RESIDENCE

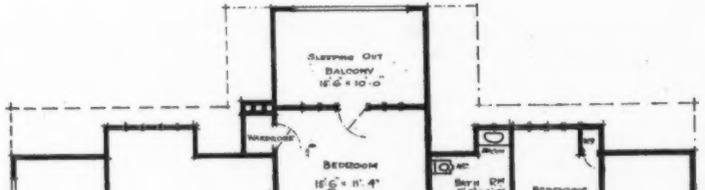
1/8" SCALE



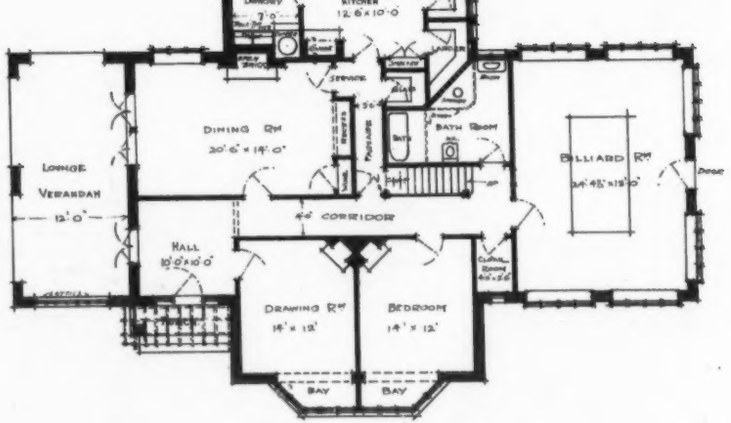
ENTRANCE FRONT

GARDEN FRONT

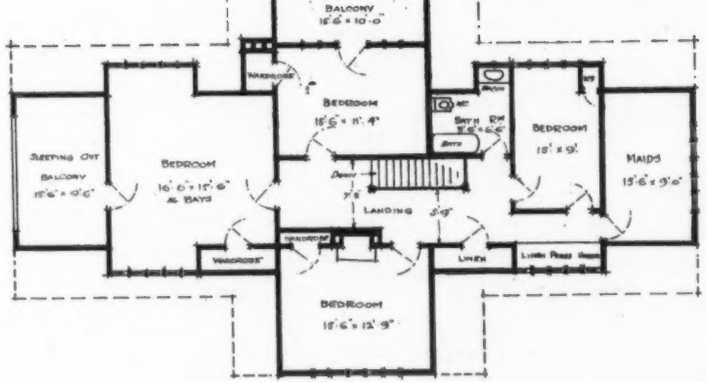




THE BUILDER. OCTOBER 10, 1919.



GROUND PLAN



FIRST FLOOR PLAN

A. Douglas Smith.
ARCHITECT
SEP '19.

MR. A. DOUGLAS-SMITH, ARCHITECT.

O, 1919.

A GENERAL VIEW OF OXFORD FROM THE ROOF OF NEW COLLEGE CHAPEL.

MR. A. DOUGLAS SMITH, ARCHITECT.